THE CHEMIST AND DRUGGIST

A Weekly Journal of Pharmacy and the Drug-trade.

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POSTCARD COMPETITION.

IT is proposed to decorate the President of the Pharmaceutical Society in commemoration of the Jubilee thereof. We shall give a guinea for the most original suggestion or design—serious or otherwise. Please begin to send in the postcards by Monday, May 27.

CIRCULARS AND PRICE LISTS.

HOW TO DISTRIBUTE THEM TO THE DRUG-TRADE.

MANY of the best advertisers in the drug-trade have endorsed our view that it is more effective as well as cheaper to distribute circulars and price-lists stitched up in THE CHEMIST AND DRUGGIST than sending them singly by post. We make such insets in the *C. & D.* notable by the fact that we only receive them twice a year for distribution, and we ensure that they get into the hands of the right people. We would advise those who think of having an inset in our Summer number (July 27, 1901) to write to our Publisher for particulars. He will also give assistance in designing or arranging insets.

Summary.

SEVERAL important decisions on general trade law are noted on p. 859.

TWO ACCOUNTS of the London Minor examination are printed on p. 843.

THE questions given at the last Spectacle-makers' examination are printed on p. 832.

AMBER-COLOURED BOTTLES should be in demand for sweet spirit of nitre (p. 835).

SOME NOTES on the Canadian exhibits at the Glasgow Exhibition are printed on p. 864.

WE GIVE the latest news from Johannesburg in regard to the druggists there (pp. 824 and 858).

IN Paris they beat Sequah by soothing anæsthetised dental patients with phonographed music (p. 820).

A MEETING OF CHEMISTS under the auspices of the Pharmaceutical Society has been held at Exeter (p. 862).

PILEWORT-OINTMENT is an excellent remedy for piles. Sir James Sawyer, M.D., tells how to make it (p. 831).

STATISTICS regarding the world's supply and consumption of quicksilver are given in an editorial article on p. 829.

THE BULGARIAN ROSE-CROP is reported upon by a Kezanlik correspondent; also the Malaga almond-crop (p. 864).

MR. PRICE, of Price, Hickman & Co., Mincing Lane, provides Mr. Reynolds with the original of the Bolivian bird (p. 826).

THE LATE Mr. Lawson Johnston's private secretary was in the Court of Appeal on Tuesday with reference to his action against Bovril (Limited) (p. 860).

THE CHESEBROUGH COMPANY are appealing against Mr. Justice Buckley's order to remove the word "Vaseline" from the trade-marks register (p. 860).

THERE appears still to be shocking medical neglect on board our transport-ships. A chemist and druggist who was on board one gives his experience (p. 832).

THE CINCHONA-PLANTATIONS OF MADRAS are the subject of an interesting illustrated communication by Mr. F. L. Seely, of St. Louis, Mo., which begins on p. 836.

THIS month's "Students' Corner" salt was a mixture of bismuth oxynitrate, potassium sulphate, and sodium oxalate. Dr. Dobbin's report begins on p. 818.

INDIRECT TAXATION of temperance drinkers is making them pay more than thirty times the duty on sugar that the revenue gets. See note on aërated waters, p. 820.

THE CHEMICAL SOCIETY had another small dispute last week, Professor Armstrong insisting that discussing papers in the absence of authors is an approved custom (p. 826.)

THE NEW PHARMACEUTICAL COUNCILLORS are Messrs. Allen, Atkins, Corder, Gifford, Martindale, Newsholme, and Savory (p. 854). Mr. Gifford was fifth on the poll—a good position for a new man.

OUR PARIS CORRESPONDENT writes about the municipal bacteriological laboratories of that city, which are in charge of Dr. Miquel. The article is illustrated with sketches by a Paris artist (p. 839).

LIGHT is the principal cause of the decomposition of spt. æther. nit. In an article on p. 833 Mr. T. F. Harvey deals fully with this and other detrimental influences, and on p. 830 we comment upon the subject as a whole.

THE PHARMACEUTICAL SOCIETY'S SIXTIETH ANNUAL MEETING was quiet and uneventful. The Vice-President engineered it so well that it was all over in less than two hours. Mr. James Paterson nominated seven Council candidates; but the move was a fizzle (p. 849).

A SLUGGISH TONE prevails in the drug and chemical markets. The unit at the London bark-sale advanced to 2*d.*, and quinine is dearer in consequence. Ergot is firmer, citric acid is lower, and soy is dearer owing to the sugar-duty. The drug-auctions are reported on p. 865.

THE DIAMOND JUBILEE DINNER of the Pharmaceutical Society was laid in the Hôtel Métropole on Tuesday evening, and our report of it, with portraits of the Chairmen, begins on p. 844. The speakers were Mr. C. B. Allen, Mr. R. A. Robinson Mr. W. Palmer, M.P., Mr. S. R. Atkins, Dr. McAlister, Mr. W. Martindale, Professor Thorpe, Sir J. C. Browne, and Mr. G. Claridge Druce.

Corner for Students.

Conducted by Leonard Dobbin, Ph.D.

Students, please note. All communications should be addressed to the Editor of "The Chemist and Druggist," 42 Cannon Street, London, E.C.

All communications and reports must bear the names and addresses of the writers, not necessarily for publication. The reports of those who ignore this rule are liable not to be dealt with.

Qualitative Analysis.

A MIXTURE of not more than three salts will form the subject of the next exercise in qualitative analysis. The mixture is to be submitted to a thorough systematic examination, all its constituents are to be detected, and proof is to be given that the substances detected are the only constituents of the mixture.

Students' applications for portions of the mixture of salts (accompanied by a *stamped and addressed envelope*, not a stamp merely) will be received up to Wednesday, May 29, and the samples will be posted on the following day.

Students' reports will be received up to Monday, June 10. Each report should contain a concise account of the work done, and should include a list of the constituents detected. In this list any substance regarded as an accidental impurity should be distinguished from the essential constituents of the salts composing the mixture.

Reports.

The powder distributed to students on May 1 contained 2 parts of bismuth oxynitrate, 2 parts of potassium sulphate, and 1 part of sodium oxalate.

The calculated composition of such a mixture is—

Bi	29·1
K	18·0
Na	6·9
NO_3	8·7
SO_4	22·0
C_2O_4	13·1
O	2·2
	100·0

Hygroscopic water, traces of iron and ammonium, and very minute traces of calcium, magnesium, and chlorine were present in the powder as impurities.

Samples were distributed to 95 applicants, and 54 papers were received in reply.

The failures in the detection of the several constituents of the powder were :—(*a*) Metallic radicals: bismuth, 1; potassium, 12; sodium, 3. (*b*) Acid radicals: nitric, 7; sulphuric, 5; oxalic, 16. The chief constituents of the mixture were all detected in a considerable number of cases, but no single correspondent succeeded in detecting all the impurities in addition.

The careful application and correct interpretation of a few preliminary tests enabled a large number of students to recognise with almost complete certainty the presence of bismuth, potassium, and sodium, and of the nitric and oxalic acid radicals; and the knowledge gained by this means was of distinct advantage in the subsequent systematic examination.

Some difficulty was experienced in connection with the complete removal of the bismuth from the acid solution of the powder by means of hydrogen sulphide. This reagent, even when added in excess, did not precipitate all the bismuth as sulphide when the solution was too strongly acid, and, as the dilution of the solution with water occasioned the precipitation of bismuth oxychloride, it was very likely that hydrogen sulphide would in many instances be passed into a solution in which the proportion of free acid was too great. It is necessary to note that bismuth sulphide and some other sulphides of the copper group are very distinctly soluble in moderately concentrated hydrochloric acid, even in the cold. The best mode of proceeding in the present case was to add a large excess of hydrogen-sulphide solution to the cold hydrochloric-acid solution of the original powder, and to allow the mixture to stand for a short time in the cold before removing by filtration the precipitate which rapidly settled down. The filtrate was then free from all but the merest traces of bismuth. The incompleteness of the removal of the bismuth at this stage in a number of cases was the cause of the supposed detection of various constituents or impurities later on.

When the hydrogen-sulphide filtrate was evaporated to dryness the residue should have been ignited to destroy any oxalate which it might (and in this instance did) contain. The omission to carry out this operation led to several mistakes.

Ammonium oxalate was only in very few cases added after ammonium carbonate had failed to yield a barium-group precipitate, and, as a consequence, a great many students failed to detect the trace of calcium which the powder contained. The addition of ammonium oxalate should never be omitted, whether ammonium carbonate has produced a precipitate or not.

In the examination for acids the majority of our correspondents, after having proved the presence of sulphate, improperly added calcium chloride to portions of the sodium-carbonate extract which had been acidulated with acetic acid, in order to test for oxalate, regardless of the fact that calcium sulphate was very likely to be precipitated under these conditions. A saturated solution of calcium sulphate is the correct reagent to employ in such cases, instead of calcium chloride.

A few correspondents do themselves a distinct injustice by the insufficiency of the reports which they send in. The value of a student's results, whether they are correct or incorrect, cannot be properly determined when only a fragmentary account of the work that has been done is given. Students—and beginners in particular—should bear in mind that the intelligent and accurate carrying out of a qualitative analysis requires knowledge, skill, judgment, and trained observing and reasoning powers; whereas the often merely mechanical operation of "taking the solution through the chart" calls for none of these requirements. Hence, if a student simply says that he performed this latter operation, without describing how he went about it or what he observed on the way, there is little means of forming an opinion as to whether his methods were good or even applicable in the particular case, and as to whether they were carried out intelligently or the reverse. Moreover, if (as is very often the case) disaster results, it is impossible to point out how it occurred, or to make suggestions for its avoidance in future.

Prizes.

The First Prize for the best analysis has been awarded to

Joseph Matthews, c/o Mr. Maxton, Abbey Corner, Kelso.

The Second Prize has been awarded to

John G. Murdoch, c/o Wilkinson & Simpson (Limited), Newcastle-on-Tyne

MARKS AWARDED FOR ANALYSES.

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TO CORRESPONDENTS.

First Prize.—Any scientific book that is published at a price not greatly exceeding half a guinea may he taken as a first prize.

Second Prize.—Any scientific book which is sold for about five shillings may be taken as a second prize.

The students to whom prizes are awarded are requested to write at once to the Publisher naming the book or books they select.

Special memoranda, suggested by this month's reports :—

1. Make sure that the sodium carbonate which is employed in preparing the solution for acids is free from chloride and sulphate.
2. Make sure that the manganese peroxide which is employed in testing for chlorides, is itself free from chloride.
3. Always employ a freshly prepared solution of potassium ferrocyanide in testiug for iron. An old solution often produces a greenish-blue coloration when added to a solution containing hydrochloric acid, but quite free from iron.
4. Always add ammonium oxalate and warm the solution (filtering off any precipitate that may form) before adding sodium or ammonium phosphate to test for magnesium. Remember, however, that the presence of ammonium oxalate very seriously affects the delicacy of the phosphate reaction for magnesium, and that the oxalate should therefore he got rid of hy evaporating the solution to dryness and igniting the residue hefore proceeding to test for magnesium.

S. V. R.—Calcium when present iu small quantity in solutions containing ammonium salts is not precipitated hy ammonium carbonate, and the latter reagent does not effect complete precipitation of calcium when present in larger quantity. Before proceeding to test for magnesium, ammonium oxalate should always he added, and the solution afterwards heated and permitted to stand for some time.

J. D. and J. W. C.—You omitted to destroy, by ignition, the oxalate present in the residue left when the hydrogeu-sulphide filtrate from the bismuth was evaporated to dryness: hence the slight precipitate of ferric hydroxide, which you afterwards obtained on adding ammonium chloride and ammonia, contained, in the form of oxalate, the trace of calcium present in the mixture. It is difficult to explain the subsequent formation of a precipitate (which you took to be calcium oxalate) when ammonium oxalate was added.

H. S.—It would not be possible to detect carbonic oxide by its odour under the conditions of the experiments in which you supposed you recognised this gas.

ARDOWA.—Your report is quite a promising one. Carefully study the general remarks upon this month's mixture and the answers to other correspondents.

T. B. NICHOL —Your report on the examination of the prepared solutions for acid radicals states that calcium sulphate produced a white precipitate in the acetic-acid solution, and that calcium chloride produced uo precipitate in the neutral solution. There is an analytical discrepancy here which requires explanation.

KRYPTON.—You will observe from the quantitative composition of the powder that something more than a trace of sodium was present.

ALEX. T. HOPE.—See reply to "Krypton." You should not have given an elaborate account of the examination for antimony and tin in a solution from which you had already proved the absence of these elements.

IRWELL and MICRO.—You must not test for potassium by means of platinic chloride in a solution which is not quite free from ammonium salts. Merely boiling a solution down to a small bulk does not decompose any considerable proportion of the ammonium chloride it may contain.

YERAC.—You will observe from the quantitative composition of the powder that you were not justified in regarding the nitric-acid radical as an impurity.

RITO.—The precipitate you obtained on addiug hydrochloric acid to the nitric-acid solution of the powder consisted of bismuth oxychloride, and it would have redissolved if you had added enough hydrochloric acid. You were pretty certain to obtain evidence of the presence of an oxalate in the portion of the sodium carbonate extract which you say you "acidified with $H_2C_2O_4$." Perhaps the formula was intended to be $H_4C_2O_2$.

BALUSTRA.—Your very slender report plainly does not do justice to the very considerable amount of work involved in your examiuation of the powder.

CHIPS.—See reply to "Krypton" and first sentence of reply to "Rito."

JOHN P. ROSS.—The chlorine which you observed on heating the powder with manganese peroxide and sulphuric acid was almost certainly due to chloride present as impurity in the former reagent. Note that $NaPO_3$ is not the formula for the salt used as a reagent in testing for magnesium, and that the precipitation of magnesium as phosphate is retarded and not accelerated by boiling.

WESTMINSTER.—The powder did not contain a borate, although the tests you applied seem to have convinced you that it did. Make a study of the behaviour of mixtures containing borate in small quantity.

PINUS SYLVESTRIS.—The white precipitate formed when the aqueous extract from the original powder was mixed with the hydrochloric-acid solution of the portion insoluble in water consisted of bismuth oxychloride. The white precipitate formed on the addition of silver nitrate to the portion of the sodium-carbonate extract which you neutralised with nitric-acid cousisted of silver oxalate, soluble in ammonia and, with some difficulty, in dilute nitric acid.

W. H. P.—You include oxalate in the summary of constituents detected, although in your report you give contradictory evidence with regard to its presence.

F. WILLIS.—You omitted to apply tests for several acid radicals, including oxalic.

W. M. A.—You omitted to test for magnesiu m, ammonium, and oxalate. Kindly address all future reports to the Editor.

OMEGA 1ST.—It is uot easy to decide as to which of several possible errors led you to conclude that zinc was present. See first sentence of reply to John P. Ross.

AURUM.—Our endeavours to obtain the reactions for lead and arsenic which you describe have proved unsuccessful.

OOMA.—Your mode of applying the ferrous-sulphate and sulphuric-acid test for nitrate is faulty. Carry out the test as directed in any of the staudard text-books. See reply to "Krypton," and first part of reply to Johu P. Ross.

FIRST PRINCIPAL.—It is quite contrary to first principles to ignore, as you do in your report, the filtrate from the hydrogen-sulphide precipitate. You give no sufficient evidence for your conclusion that sulphur was present.

STATIM.—It was uot possihle to detect magnesium hy adding sodium phosphate to the hydrochloric-acid solution of the original powder. The precipitate which you obtained in this way no doubt cousisted of bismuth oxychloride.

DESPERANDUM.—You do not appear to have submitted the powder to an exhaustive examination. At least, your report does not describe any experiments that could have led to the detection of the potassium or of the oxalic-acid radical, or that were intended to prove the absence of quite a considerable number of other metallic and acid radicals. It is not possible to ascertaiu with certainty whether you ever examined the filtrate from the hismuth sulphide for metals of the iron, barium, magnesium, and alkali groups.

MACTAVISH.—The odour which you mistook for that of sulphurous anhydride was due to nitric acid, evolved when the powder was heated with sulphuric acid.

H. M.—Ammonium arsenate is not as delicate a reagent for magnesium as ammonium phosphate.

Gemini.—Your examination for the commoner acid radicals was not exhaustive. Make a mixture for yourself, having the composition of the present exercise, and practise upon it until you can detect its various constituents with certainty.

Spes,—See reply to "Krypton."

L. J.—We can offer no explanation for your statement that the precipitate produced on adding barium chloride to the neutralised sodium-carbonate extract was soluble in hydrochloric acid. It consisted of barium sulphate. See reply to "MacTavish."

Carolus.—There is no reagent by means of which you can detect the presence of an oxide with certainty. You are not asked or expected to detect oxides as a class. See last sentence of reply to "Gemini."

J. W. Rogers.—You merely sent a list of the constituents you detected, but omitted to send any description of the course of your analysis. From the former alone it is impossible to estimate the value of your work.

English News.

Local Newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

Brevities.

Mr. W. Dawson has been appointed chemist and druggist to Slough Urban District Council.

The hearing of the manslaughter-charge against Mr. O. E. Trezise, chemist and druggist, Wellingborough, has been adjourned until May 30.

The students of the Nottingham School of Pharmacy had a botanical excursion to High Park Wood on May 16, Mr. A. Russell Bennett guiding them.

Messrs. S. Maw, Son & Sons, Aldersgate Street, E.C., have been appointed by Widnes Town Council to supply surgical appliances to the new hospital in the borough.

Mr. Samuel Hurman Longman, of Highbridge, chemist, has been granted the temporary transfer of a wine-licence formerly held by Mr. T. H. Chappelow, at Church Street, Highbridge.

Dr. W. J. Borthwick, of Fitzroy Square, died in the North-West London Hospital last week from blood-poisoning, resulting from a cut to his hand from picking up a broken bottle in his surgery.

The annual report of the Erith Cottage Hospital states that the expenditure on drugs and surgical appliances during 1900 amounted to 32*l.* 2*s.* 9*d.*, against 10*l.* 16*s.* 7*d.* for the corresponding period of 1899.

Two boys and their mother were charged, on May 16, with stealing nine turkeys' eggs, value 5*s.*, from Mr. C. W. Southern, chemist, Belper. The lads were ordered to be birched, and the mother was fined 1*l.* and costs.

At the West Ham Police Court, on Wednesday, several firms were fined under the Factory Act, amongst them Messrs. T. Tyrer & Co., the offence in this instance having been committed by persons employed by the foreman without the sanction of the head of the firm.

The Boots' campaign has commenced in London, the *Daily Express* of May 22 containing at the right-hand side of the title the usual small advertisement to this effect:—"Boots, cash chemists; largest, best and cheapest; over 200 branches; every branch managed by a qualified chemist."

Dr. Rowland Humphreys, Hon. Secretary of the Midwives Bill Committee, 12 Buckingham Street, Strand, W.C., is making a public appeal for the interest of Parliamentary voters in promoting the legislation necessary to diminish what he calls the "deplorable mortality due to the negligence of untrained midwives."

During the manufacture of some French polish on the premises of Mr. W. H. Boyd, oil and colour merchant, Oldham Road, Manchester, on May 17, some of the liquid came in contact with a naked flame. An explosion followed, which injured Mr. Boyd's son and four firemen who had been called to put out the flames.

At Hull on May 21, John O'Rourke and James Crahh were each sent to prison for six weeks for stealing a 1-lh. bottle of liquid extract of aconite, valued at 6*s.*, from the warehouse of Messrs. Allison, Johnson & Foster, manufacturing chemists and wholesale druggists, 11 Blanket Row, Hull. This was the aconite that the man Maloney was poisoned with (*C. & D.*, May 18, page 783).

A Burton hotel proprietor, named Punter, sued Messrs. S. Key & Co., of Wolverhampton, on May 15, for 50*l.* damages. Plaintiff ordered some wines and cordials from the defendants' traveller, and with the order was sent some caustic soda, a portion of which plaintiff drank for whisky. The result was ulceration of the mouth, throat, and stomach. The jury disagreed, but defendants agreed to a verdict for 25*l.*

The inventor of "King Midas Gold Paint," Malcolm Charles Healey, was successful in an action for three months' salary in lieu of notice at Liverpool on May 18. The defendant was a Mr. Winnard, who financed and controlled the business, and for whom Healey acted as manager until his dismissal. A counterclaim in respect to certain monetary transactions was referred to the Registrar for decision.

Inspectors of Secondary Schools.

We notice amongst the gentlemen who are appointed by the King as inspectors in the secondary branch of the Board of Education the following who are connected with science:—Messrs. C. A. Buckmaster, M.A., F.C.S.; H. H. Hoffert, D.Sc.; F. Pullinger, M.A., B.Sc.; E. J. Ball, Ph.D., F.I.C.; S. F. Dufton, M.A., D.Sc., F.C.S.; D. E. Jones, B.Sc.; W. B. D. Edwards, F.C.S.; A. E. Tutton, B.Sc., F.R.S., F.C.S.; W. R. Swain, B.Sc., and A. Dufton, M.A., B.Sc.

London and New York Chambers of Commerce.

The London Chamber of Commerce have invited the representatives of the New York Chamber of Commerce, who are shortly to visit this country, to a banquet which will be held in the Grocers' Hall, Prince's Street, E.C., on Wednesday, June 5 next, at 7 P.M. An influential reception committee has been appointed, amongst whom we notice the names of Mr. S. Boulton, the Hon. Alban G. Gibbs, M.P., and Mr. H. S. Wellcome. The President of the Society of Chemical Industry has intimated his intention of being present. The price of tickets for the banquet is 3*l.* 3*s.* each, to be obtained from Mr. Kenric B. Murray, Secretary, Botolph House, Eastcheap, E.C.

Dearer Aërated Waters.

The Mineral-water Makers' Association has secured the signatures and deposits of all engaged in the trade to the agreement to raise the prices of all mineral waters on and after May 21 from 1*s.* per dozen large bottles to 1*s.* 2*d.* per dozen, and from 9*d.* per dozen small bottles to 10*d* per dozen on account of the duty on sugar. This applies to all London and a radius of fifteen miles from Charing Cross. Any of the signatories who may be discovered selling under these prices forfeits the money deposited under the agreement. Shopkeepers who charge 1*d.* small and 1½*d.* per large bottle for mineral waters will raise their prices ½*d.* per bottle.

L.C.C. Matters.

At a meeting of the London County Council on May 21, a report from the Public Control Committee pointed out that two of the gas companies in London distributed to consumers in their gas-supply a considerable quantity of oil-gas, but how much of that is carburetted water-gas they were unable at present to say. The matter had been considered by a Department Committee, but no action had yet been taken on the report, although it was shown that in case of leakage it was highly dangerous. The Committee proposed that the Home Secretary should be written to asking if it was intended to take any steps, and that in the meantime the chemist should make a series of tests to ascertain the amount of water-gas which was added to the gas supplied by the gas companies of London. They recommended that such tests should be taken for a period of six months, and this was agreed to.

A report was brought up by the Establishment Committee on the annual revision of salaries. In the chemical department it was recommended that Mr. R. Grimwood, the senior

chemical assistant, should be appointed chief assistant, and that his salary should be increased from 450*l.* to 500*l.* by two annual instalments of 25*l.* each. It was recommended that the salary of Mr. W. J. Livingstone, the chief clerk of the department, be increased from 350*l.* to 400*l.* by two annual instalments. The increases were agreed to.

A Valuable Legacy.

The collection of books of the late Professor D. J. Leech, M.D., the eminent Manchester consultant, has been presented to Owens College. It consists of 1,500 volumes, and comprises all the authoritative works on therapeutics and materia medica, besides books dealing with pharmacy, medical botany, and medical chemistry in relation to the Pharmacopœia, which are specially interesting in respect of the work done by the deceased as Chairman of the Pharmacopœia Committee of the General Medical Council in preparing the last edition of the British Pharmacopœia.

Birmingham Notes.

The stupendous water-scheme of our city is nearing completion. The pipes are within a mile of the city. A dozen million sterling will be required to supply a water that will have about 6 gr. per gallon total solids in place of 26 as at present.

The publisher of the *C. & D.* desires to warn the trade in Birmingham that one or two men there are collecting subscriptions for the *C. & D.* without authority. No subscription should be paid to anyone who is unable to give an office-receipt on behalf of the proprietors of the *C. & D.*

Yet another phase of the medical trouble in our city is the formation of the Birmingham and District General Practitioners' Union, which held a meeting on May 16, and decided to discountenance the exploiting of medical men by limited-liability companies, as the consultative institute is held to be.

A party of pharmaceutical students, including two ladies, visited Campion Hill Park Botanical Garden last Monday morning, in charming weather. The beds—representing *Thalamiflorœ*, *Calyciflorœ*, *Incompletœ*, and monocotyledons—were carefully examined under the guidance of Mr. F. H. Alcock, and numerous "finds" were recorded. Afterwards light refreshments were provided by the leader at the kiosk. The journey was made by the new electric-traction route inaugurated last week.

The dinner of the local Association took place on May 22, at the Great Western Hotel, Mr. John Barclay in the chair. It was fairly well attended. The social side received the greater attention, and happily long-winded speeches were not the order of the evening. The invited guests were those professional gentlemen who had so kindly assisted the association by papers read and other useful ways. It is hoped and believed that the present President and Secretary will remain at least for another year at their posts, which they have so admirably filled for the past twelve months.

Fires.

A fire broke out on May 15 at premises used as a store by Mr. R. A. Metcalfe, chemist and druggist, at Southgate Street, King's Lynn, which resulted in the destruction of the building and its contents.

On May 15 "a pot of chemicals" caught on fire at the works of Messrs. Innes & Co. (Limited), oil-refiners, Hull, and ignited the roof of the boiler-house. The flames were extinguished before the arrival of the fire-brigade, but Mr. J. H. Innes, the manager, had his hands and arms severely burned.

Cricket.

A league fixture was played on May 18 at Brockley between the City Mills C.C. (Stafford Allen & Son) and the Davy Hills C.C., resulting in a victory for the latter team, for whom Maughan (32) and Dean (22) batted well, and C. Parker took 4 wickets for 8 runs. Scores: City Mills, 27; "Davy Hills," 70.

Kindrng C.C. (Dakin Brothers) played the Gas Meter C.C. at Stamford Hill on May 18. The result was: Kindrug, 44; Gas Meter, 26. For the winners A. Appleton scored 17, and F. Barley captured 8 wickets for 9 runs.

Chemists' Dispensing-scales.

Mr. H. Van Tromp, inspector of weights and measures for North Staffordshire, has reported to the Finance Committee of the Staffordshire County Council respecting dispensing-scales that, during the past quarter, in twenty-five cases informations have been laid against chemists. Quite half the number of dispensing-scales examined were unstamped, and in the majority of cases unfit for dispensing small quantities of drugs, the inaccuracy in many cases being 3 gr. to 4 gr., and in one case 8 gr. Twelve cases have been heard, and convictions followed. Thirteen informations remain, including two where the owner of the scales neglected to produce them for examination on request.

The Week's Poisonings.

Fifteen fatal poisonings have occurred since our last report, and four more have been attempted. The most noticeable feature of this week's list is the prevalence of salt of lemon, which was used in no fewer than five cases, three of which were fatal. Hydrochloric acid was taken in mistake by a child at Winsford, whose father had been using it for soldering-purposes. In the scheduled column carbolic acid caused four deaths, and oxalic acid three, while corrosive sublimate was taken by a doctor at Leicester, and a young doctor at Fulham took a fatal dose of morphine. A man died under chloroform at Liverpool, a Portsmouth clerk attempted suicide with laudanum, and a blind man at Dulwich tried to drink a quantity of atropine solution, but was prevented in time. At an inquest held at Stowmarket on May 17, upon the body of a young woman named Pearce, the evidence of Mr. Sydney Stearn, chemist and druggist, an assistant to Mr. R. J. Simpson, chemist, Stowmarket, was that deceased came into the shop and asked for threepennyworth of mice-poison, which he supplied, entering the transaction in the poisons-book. The poison was a preparation of strychnine, indigo, and sugar, and did not come under Part 1 of the Poisons Schedule, as vermin-killers were under Part 2. There would be about 7 gr. of strychnine in the mixture bought. Poisons like this were supplied every day, and if purchases betrayed the slightest trace of excitement chemists were careful to make full inquiries. There was no way of preventing people from signing a fictitious name, or of obtaining vermin-killer. The medical evidence showed death to be due to strychnine-poisoning, and the jury, in recording a verdict in these terms, expressed an opinion that there should be greater restrictions upon the sale of such poisons. The Coroner undertook to communicate this presentment to the Stowmarket representative of the Pharmaceutical Society.

Irish News.

Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

Masonic Benevolence.

Albert H. Miskelly, son of the late Mr. J. K. Miskelly, druggist, Lodge 602, Derrighy, has been elected a pupil of the Masonic Orphan Boys' School, Dublin. 2,653 votes were recorded.

Company Dividend.

The directors of A. & R. Thwaites & Co. (Limited), chemists and aërated-water manufacturers, Upper Sackville Street, Dublin, have declared a dividend at the rate of 7 per cent. on the shares of the company.

A Remitted Action.

In the King's Bench Division, Dublin, on May 14, the case of Hamilton, Long & Co. (Limited) *v.* Polke & Co. was remitted to the Ballina Sessions to be held in June. The action is to recover the price of goods sold and delivered by the plaintiffs to the defendants.

A Golden Wedding.

Mr. William Dobbin, J.P., chemist and druggist, Belfast, and Mrs. Dobbin have just celebrated their golden wedding, having been married on May 15, 1851. Mr. Dobbin, who is nearly 84 years old, has been laid aside for a considerable time owing to illness, but Mrs. Dobbin is still in good

health. Many congratulations were extended to the aged couple upon the interesting occasion. Dr. Leonard Dobbin, of Edinburgh, is the youngest son of Mr. William Dobbin.

Wages Recovered.

Sir Henry Cochrane, director of Messrs. Thacker & Hoffe's drug and chemical concern, Dublin, appeared before the Recorder's Court on May 21 as defendant in an action brought against him by one of his employés to recover a month's wages and other moneys alleged to be due. The defence was that the plaintiff had unduly absented himself from work and was otherwise unsatisfactory. The Recorder held that the plaintiff was wrongfully dismissed, and gave a decree for 3*l*.

The Conference.

A meeting of the local committee who are making arrangements for the visit to Dublin of the British Pharmaceutical Conference is to take place on May 24. Details will not be available till next week, but it is an open secret that the meetings are to take place in the Lecture Theatre of the Royal Dublin Society's house. The Shelbourne Hotel, on Stephen's Green, will probably be the headquarters of the Conference. Subscriptions to the Guarantee Fund are coming in very well.

Contract Notes.

The Londonderry Poor-law Guardians have, in accordance with the Local Government Board's instructions, reconsidered the tenders for medical-appliances. The Chairman said that tenders had been received, one offering 25 per cent. and the other 20 per cent. reduction off the scheduled prices. The lowest was accepted, and it was seen that the tender came from Messrs. Clarke, Belfast, who were also contractors for medicine. The Clerk said that the tender must be accepted, exempting the item of trusses, which were to be supplied and fitted on the conditions already agreed to. The Chairman said that was understood, and would be stated to the contractors.

Recently the Local Government Board issued a circular to Irish Poor-law Guardians stating that in future the storage and packing of empty medicine-bottles must be looked after by the dispensing officers. The order has given rise to much dissatisfaction generally, and it is held by those concerned that the L.G.B. has no authority to compel medical men or pharmacists to pack empties. The Irish Poor-law Association have asked the Local Government Board to withdraw the circular, and it is intended to test the matter legally in the event of a refusal to do so.

Dispensers' Items.

Mr. W. Vincent Johnston, M.P.S.I., proprietor of the Ranelagh Pharmacy, Dublin, has been appointed compounder of medicine to his Majesty's forces at Biggars Bush Barracks.

Mr. Gerald McGuire, apothecary to the Dingle Union, has written to the Board pointing out that his salary of 20*l*. a year is too small in view of increased duties imposed upon him during the last ten years. He has to keep a record of all medicines supplied to patients, and weigh and measure every article received from the drug-contractor. The Guardians have increased the amount to 40*l*., but a motion is on to rescind the increase, and meanwhile particulars are being sought as to the salaries of compounders in other districts.

The Personation-case.

In the Nisi Prius Court, Dublin, last week, the case of Joseph Haddock, who was recently charged with fraudulent personation of two medical students at the Preliminary examination of the Royal College of Surgeons in Ireland, came on for hearing. The question raised was whether, on the evidence given for the prosecution, any offence known to the Common Law had been revealed. The Lord Chief Justice said Haddock defrauded the College, holding a statutory test, and he also defrauded the public by substituting an incompetent for a competent man. On behalf of Haddock, it was urged that a candidate might be unable to pass the English examination, and yet might become a most skilful medical man. The Lord Chief Baron was of opinion that the case was one for a criminal prosecution. In "cribbing" the great crime lay in being found out. Judgment was reserved.

Scotch News.

Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

Personal.

Mr. Walter Stavert, chemist and druggist, has been appointed junior bailie of Selkirk. Mr. Stavert, who has been a member of the Town Council for the past eighteen months, is the youngest bailie that ever sat on the Selkirk bench.

Business Change.

Mr. A. Profeit Wallace, chemist and druggist, 96 Victoria Road, Aberdeen, has purchased the business carried on for the past thirty years by Mr. D. Ritchie at 39 Market Street, Aberdeen. Mr. Wallace has taken Mr. P. D. Milne, chemist and druggist, at present assistant to Mr. Hunter, chemist, Union Street, Aberdeen, into partnership, and both businesses are to be carried on under the title of "Wallace & Milne."

Edinburgh Chemists' Golf Club.

The second competition this year for the "Gibson Handicap Medal" was played over the Braids last week, with the following principal results:—

Mr. P. R. Beattie	104 – 25 = 79
Dr. Sharp	104 – 20 = 84
Mr. A. W. Wilson	84 + 2 = 86
Mr. D. McLaren	98 – 10 = 88
Mr. Jas. Finlay	89 scratch
Mr. C. F. Henry	104 – 15 = 89

Nineteen members turned out, and the scoring all round was particularly good. Mr. Wilson's scratch score of 84, and Mr. Beattie's handicap score of 79, establish new records for the club.

The second round of the "Hole and Hole Competition," which has been in progress since the beginning of April, has now finished. Undernoted is the draw for the third round:—

Handicap Holes		Handicap Holes
0	Mr. Jas. Finlay against Mr. Duncan McLaren	5
0	Mr. Jas. Stott against Mr. J. A. Forret ...	0
8	Mr. A. J. Dey against Mr. G. Robertson ...	3
+1	Mr. A. W. Wilson against Mr. H. D. Alexander	+1
3	Mr. Geo. Lunan against Mr. J. C. Laird ...	0

French News.

(From our Paris Correspondent.

Pasteur Institute.—The first course of lectures on analysis and applied chemistry at the Pasteur Institute, Paris, has just terminated. The next (second year) will commence on November 4. Names may be inscribed at once, and the number of places is limited. All information is supplied at the Service d'Analyses, 28 rue Dutot, Paris.

Competition for Hospital Pharmacists.—The annual competition for prizes awarded to Paris hospital pharmacists will take place on June 10, 1901, in the amphitheatre of the Administration of Public Assistance, 3 Avenue Victoria. All hospital pharmacists are obliged to take part in this competition, and must, consequently, have their names inscribed at the general secretary's office in advance.

The Report of the International Congress of Medicine held here last year is now in the press, and the first five volumes were laid on the table at the last meeting of the Paris Academy of Medicine. This is claimed as unexampled rapidity "which does honour alike to French science and the publishing trade of the country." There are to be seventeen volumes, and the last one is promised by the end of July next.

Aseptic Washing of Linen.—M. Delorme, an army doctor, brought to the notice of the Academy the apparatu

used at the Pasteur Hospital for washing and disinfecting linen. M. Delorme proposed that the Academy invite the administrative authorities to prescribe the use in all public washhouses of these disinfecting washing-apparatuses. The principle of the proposal has been approved of, and further consideration of the subject handed over to a committee composed of MM. Valin, Jungfleisch, Grancher, Roux, Kelsch, and Delorme.

Pharmacy in Tunis.—Before the French occupation Tunis was quite independent of the Turkish legislation, the laws concerning the pharmaceutical art being enforced in neither country. Since then various attempts have been made to alter this state of things by health councils and commissions at Sousse and Sfax, but the pharmacy laws are not enforced. Such articles as antipyrin, sulphate of quinine, iodide and bromide of potassium, as well as arsenic and cyanide of potassium, are sold by persons with no connection with pharmacy. Indeed, it is said that there are actually more pharmaceutical products sold in the bazaars than in the chemists' shops of Tunis.

Painless Extraction of Teeth.—M. Laborde has laid before the Paris Academy of Medicine the outlines of a new method of tooth-extraction, which consists in "charming the ears of the patient instead of inflicting on him a terrible and very often invincible dread, however rapid and instantaneous the operation may be." The patient is given nitrous oxide, and at the same time a phonograph delivering some gay air or other is attached to his ears. In this way the nightmare which many patients experience with this anæsthetic is replaced by pleasing sounds and the soothing influence of music. M. Laborde wonders whether it is not possible to extend the method to operative anæsthetics in general, even with the use of ether and chloroform.

Competition in Pharmacy.—A competition will be opened in December at the Ecole d'Application of the service of military health in Paris for the admission of pharmacists of the first class as probationer pharmacists (*pharmaciens stagiaires*). The candidates must be born or naturalised Frenchmen at least 26 years old, have been recognised as fit for active service in the army, and agree to serve for at least six years in the health division of the army. The examination will consist of (1) a thesis on the subject of medicaments and medical science; (2) questions on physics, chemistry, natural history, and pharmacy; (3) preparation of one or more medicaments inscribed in the Codex, and recognition of minerals, simple drugs, dried or fresh plants, and compound medicaments. On passing the pharmacists are paid, during their stay at the Ecole d'Application, at the rate of 3,096f. (123*l.*) per annum, and they wear uniform. Those who pass the final examinations on leaving are nominated *aides-major* pharmacists of the second class.

Pushing Specialities.—The Syndicate of Pharmacists of Ardèche and Drôme has recently printed the following memorandum for doctors :—

Scientific Chemical Society of the South East.
Chaptal Laboratory, Montpellier.

Monsieur le Docteur,—The Society of the Chaptal products has been founded by a group of chemists with the object of opposing to industrial specialities often manufactured by persons foreign to the profession, very active products, prepared under the constant surveillance of several pharmacists and under the direction of a consulting-committee, recruited from among the professors of the Montpellier and Marseilles Schools of Pharmacy.

Would you kindly help our work of raising the profession by prescribing to your patients the Chaptal products, the nomenclature of which is herein given?

We should be pleased if you will try our products, and will forward to your address any you may be in need of.

Yours faithfully,

The Members of the District Committee.

Then follows a long list of the products manufactured. The syndicate is endeavouring to persuade other societies of pharmacy to take up the sale of the same goods, and supplies printed matter for that purpose.

French Pharmacy Students.—The *Pharmacie Française*, the organ of the students here, has just finished its fourth year of existence, during which time its importance has continually increased. Many of the partisans of the Association would like the students of chemistry and pharmacy of all France to become united in a compact body. Efforts with this aim in view have already been made, but hitherto this Association has been almost entirely composed of members of the Paris School, though one or more of the southern establishments have now joined hands; and I may especially mention the Montpellier School. Past efforts are to be renewed. The Association now claims to be independent of all coteries. The last number of the *Pharmacie Française* published a note to the effect that advertisements of the manufacturers of pharmaceutical specialities have been suppressed on account of an unfriendly article in the journal. The students replied by an article in defence of the profession, and forwarded to all the syndicates of pharmacy in France a letter of appeal, with a view to enlisting sympathy The matter has been taken up not only by the Latin Quarter students, but by those at Marseilles and Montpellier.

Anti-diphtheritic Serum.—As a result of the unusual number of cases of diphtheria in Paris (*C. & D.*, May 18, page 784) the Minister of the Interior has addressed a circular to all the doctors in France giving in precise terms the treatment of the malady. At the Pasteur Institute here the increase is attributed to the delay which frequently occurs in administering the anti-diphtheritic serum. The following are the passages of the Minister's circular which are of interest to pharmacists, as the serum is sold by them in France :—

The mortality in cases of diphtheria has been reduced of recent years in considerable proportions by the use of anti-diphtheritic serum. I notice, however, notable differences in the results obtained. Statistics show that in certain districts inoculated patients are all cured; elsewhere that the number of deaths are more than half of the cases treated. This difference can only be the result of the way in which the treatment is applied. It frequently happens that when doctors have anti-diphtheritic serum which is a few months or even a few weeks old, they will not use it, and prefer to wait for a fresh supply. In this way precious time is lost, and often the life of the patient is endangered by the delay. Medical men certainly may get new serum if they judge it necessary, but they should immediately use that they have in hand. Repeated experiments have shown that the serum loses none of its curative qualities by being kept even for a year. In all serum having been prepared a certain length of time a slight sediment is found, which settles at the bottom of the bottle, leaving the liquid perfectly clear. This deposit does not indicate any alteration of the serum, which still possesses all its therapeutic qualities. When the injection of serum is made the very day the false membrane appears the mortality is practically *nil*, and does not exceed 2 per cent. When the injection is made the second day the proportion of mortality increases to 6 per cent. It mounts suddenly to 30 per cent. when the injection is made the third day, and 50 per cent. when made the fourth day or later.

A Children's Exhibition.—Visitors to Paris last year will remember the fine building known as the "Petit Palais" exactly facing the much larger structure called the "Grand Palais," to which I referred when writing of the Paris Salons last week. Parisians can overlook any slight inconveniences last year's exhibition may have occasioned them in their appreciation of having secured these two magnificent buildings as an addition to the beauty and attractions of the City. My object in referring to the building is to mention a very interesting display taking place there just now under the name of the Exhibition of Childhood. "I will undertake to find traces of arsenic anywhere," said the famous chemist Raspail when giving evidence in a court of law, and "you will find something of more or less direct interest to pharmacy almost everywhere," said a leader of French pharmacy to me one day when I was bewailing the dearth of news. Foods and preparations of one kind or another intended for children are shown at this exhibition. There is also a plan of the Sanatorium at Arcachon for children, erected by the French League against Tuberculosis, and the model of a "couveuse d'enfants" for the artificial raising of babies, as well as a good display of toilet soaps, powder, and perfumery. I also came across nine of the handsomest pharmacy-pots I ever remember seeing. They are lent by the Paris *Assistance Publique*, and though the connection of these fine vases with children seems remote, the pleasure in coming across them unexpectedly was none the less. Three of the vases decorated in pink are particularly handsome.

South African News.

(From our Colonial Correspondents.)

Monsonia Biflora and Ovata are still in request as remedies for dysentery. It has been proved that the spirituons preparations are not so successful as the aqueous, so the medical men in charge of the military hospitals are asking for either liquid extract or infusion.

Horse-sickness is very prevalent in various parts of Natal. So far the method of inoculation introduced and advocated by Dr. Edington, Cape bacteriologist, has not found its way here. Arsenic in small doses seems in most favour amongst farmers as a preventive.

Transvaal Pharmacy Law.—The President of the Transvaal Pharmacentical Society has been in communication with Sir Alfred Milner, the High Commissioner, with reference to the status of the Society and chemists generally now that they have come under British rule. He is also nrging for a pronouncement on tbe alteration of the Transvaal pharmacy law, which was contemplated before the war broke ont.

Captain Butters, of Lord Kitchener's bodyguard, who was killed at Lindley, O.R.C., recently, was the brother of Mr. R. Butters, chemist, of Johannesbnrg, the President of the Transvaal Pharmaceutical Society. Captain Butters had previously been through the Basuto and two Matabele campaigns, and was second in command of the gallant garrison which was besieged at Elands River, which they successfully defended against heavy odds for a long period.

Johannesburg Prices. — We take the following items and prices from the revised price-list of the Imperial Government Relief and Supply Stores, which came into force on April 22 last:—Tartaric acid, 2*s* 11½*d*. per lb.; citric acid, 2*s*. 9½*d*. per lb.; Bovril (2 oz.), 1*s*. 5*d*.; ditto (4 oz.), 2*s*. 10*d*.; cream of tartar, 1*s*. 9*d*. per lb.; fruit-salt, 3*s*. 1*d*.; Jeyes' fluid (2-gal. drum), 25*s*.; Lemco (2 oz.), 1*s*. 9½*d*.; ditto (4 oz.), 3*s*. 6*d*.; Keating's insect-powder, 7½*d*. to 1*s*. 3*d*.; carbolic powder, 11½*d*.; saccharin, 34*s*. 6*d*.; Seigel's syrup, 2*s*.; Pears' soap, 5½*d*.

A Disastrous Fire broke out in Durban on April 24, involving a loss of something like 100,000*l*. Messrs. Reed & Champion's pharmacy suffered severely. The fire broke out in the roof and quickly spread to the rooms in the top storey, which were heavily stored with all kinds of patent medicines and packed goods. Fortunately most of the goods were in original cases. The efforts of the firemen were successful in preventing the flames getting down to the lower portion of the premises. The front store was damaged by water, but otherwise remained intact.

Personal Notes.—Mr. Tom Jolly (Messrs. Jolly & Adcock) has returned to Krugersdorp, where his partner is a sergeant in the Cape Medical Corps. Mr. Jolly has been staying at Grahamstown, and he will now have to become a member of the Rand Rifles.—Mr. C. W. Hyland, chemist, has been permitted to return to Johannesburg, and has opened his Jeppestown shop. His town shop is in the Market Square, but he is unable to open as he cannot obtain an assistant.—Mr. Martlew, who has apparently recovered from his wound, has been sent to Potchefstroom as dispenser to the Boer camp of refugees.—Mr. Norman has gone to the Vereeniging camp, and Mr. A. E. Adams, who also was wounded, to Heidelberg.

Rand News.—At least one business that was allowed to keep open at Johannesburg during the war found comfort for the unsatisfactory surroundings in the enhanced prices rnling before the British occupation. In this particular case the chemist in charge managed to dispose of over 2,000*l*. worth of stock at about 25 per cent. over the usual prices. Now most of the stocks of patents are at an end and sales are correspondingly low. There are still lines of most drugs in the town for prescription-purposes, and just before the mail left the smaller chemists obtained permission to get up stock from Durban to the extent of 1 ton each, this amount being increased to 5 tons in the case of the larger firms. As there is a 20-per-cent. duty on patents and put-up articles in Cape Colony and Natal, and a 7½ per cent. *ad-valorem* dnty in the Transvaal, it will hardly pay chemists there to get many of these lines carriage forward. In addition to these duties there is an extra 10-per-cent. duty on toilet articles, and an extra 25*s*. per gal. on eau-de-Cologne and perfumes, making three duties in all on perfumes. All this will not tend to induce the Rand chemists importing from home, and to buy locally when necessary. Trade generally is poor, as the chemists have little to sell, and folks little money to buy with.

A Civil Compounder's Note.—Writing from Heilbron, O.R.C., a volunteer compounder sends us a few interesting notes. The troops there are in an isolated position, and a train reaches Heilbron or an average but once a week.

The hospital consists of the town schoolhouse and about fifty bell-tents. The dispensary is in the cloak-room, and I had to fix up the necessary shelves myself. The morning sick from the regiments stationed here average about forty, and we have in-patients to the number of seventy or eighty. Enteric, dysentery, and simple continued fever prevail. We have also an epidemic of scarlet fever and one case of measles. Every hospital almost has its own particular stock-bottle of mist. pro dys., but I think that Capt. Rattray's gives the best result of any:—

Ferri sulph.	gr. iij.
Ac. sulph. dil.	ɱx.
Tr. opii	ɱv.
Sol. mag. sulph. (℥ij. ad ℥j.) ...	℥j.
Aq. ad	℥j.

M.

Sig.: ℥j. every hour until stools turn black, and then—

Bism. subnit.	gr. x.
Tr. chlor. et morph.	ɱx.
Aq. ad	℥j.

Ft. haust.

Every four hours.

There is plenty of duty here. We are so isolated that we cannot get rid of our sick, as if we were on the main line. Volunteers who have served twelve months in the country are allowed home. We, the compounders, are not. Why? The P.M.O., Bloemfontein, in auswer to application to return at the end of the twelve months' service, said we could *not* be spared, and there's the rub.

Our correspondent concludes with a warning to assistants who think of going out to South Africa after the war is over. He says 13*l*. a month there is about equal to 4*l*. a month at home.

East Indian News.

Personal.—Mr. H. R. Hoyles, Ph.C., F.C.S., assistant-manager, Messrs. Treacher & Co. (Limited), Bombay, has left on a short visit to the old country.—Mr. J. E. Davis (Cadbury Brothers) and Mr. C. H. Allen (representing the "Vinolia" Company, Limited) are also homeward bound.

Madras and Merchant Shippers.—The Madras Chamber of Commerce is agitating for reform in the following matters:—The high rates of freight under which importers and exporters labour; the inadequate space available for exports; the excessive time taken on outward and homeward voyages; the irregularity of vessels outward bound; frequent cases of over-carrying cargo destined for Madras.

India Parcels Post.—The new inland parcels rates sanctioned by the Secretary of State are as follows:—Not exceeding 20 tolas, 2a.; exceeding 20, but not exceeding 40 tolas, 4a.; for each additional 40 tolas or fraction thereof up to 440 tolas (about 11 lbs), 2a. The prepayment of parcels will be compulsory in all cases. It is estimated that the reduction sanctioned will, apart from any resulting increase of business, involve a sacrifice of about 5 lakhs of rupees a year.

Indian Opium-crop.—The extraction of opium is over in some of the eastern districts of the North-West Provinces, and is progressing elsewhere. The reports regarding the outturn are not uniform. The best come from Uhao, Farrukhabad is also very good, and the worst from Benares. In Ballia and Aramgarh the yield is about the average, and from most other districts the crop is reported to be good or fair. It has been injured, however, by damp in Mirzapur and by hail in parts of Gonda.

Colonial and Foreign News.

Canada Growing.—Canada's trade on the basis of goods entered for consumption and exports, exclusive of coin and bullion, continues to exhibit a substantial growth. For the nine months which ended on March 31, the aggregate trade exceeded that of a similar period in the previous fiscal year by £17,105,276. This increase was entirely in exports, as the imports for the nine months show a falling-off of £683,762. There was a decline of £1,015,586 in the imports of dutiable goods, but the imports of free goods increased by £331,824, thus making the net decrease as stated above.

Chilian Nitrate-production. — The production of nitrate in Chili last year amounted to 32,474,600 Spanish quintals, of which 31,459,600 quintals were exported. The world's consumption is set down at 30,443,000 quintals, so that on the basis of these figures, compared with those for 1899, there was an over-production of 1,714,800 quintals and an over-exportation of 1,162,800 quintals. On the other hand from a comparison of the totals with respect to consumption there was a decrease last year of 269,700 quintals. The falling-off occurred chiefly in the European markets, Germany figuring for 1,273,000 quintals and Africa for 259,600.

Pharmacy in Holland.—A special commission was some time ago appointed to study the reorganisation of pharmacy in Holland. In the report of the commission now published the introduction of unsaleable and non-heritable concessions is proposed. The country, it is schemed, should be divided into districts of 10,000 inhabitants, with one apotheke in the most suitable centre. Where the density or prosperity of the population is not sufficient to assure the apotheker of a suitable income, the State will be required to grant an allowance. After a certain period of transition, the right of dispensing will be take from the doctors and a State sale-price introduced. The sale of poisons is also recommended to be regulated according to the German method. Sera and organo-therapeutic preparations should be manufactured in a State laboratory, and sold to the apothekers. The Dutch druggists are also petitioning for reforms, and have presented the ministry with a petition asking for the free sale of more remedies and of all substances used in the household or for technical purposes. They also demand that druggists should be represented in the commission appointed to form that list.

Production of Pumice-stone in Italy.—The German *Nachrichten für Handel und Industrie* recently gave some interesting details as to the production of pumice-stone in Italy. It is found principally on the island of Lipari, in the north-west of which there is a large deposit from one to four metres thick and covering about 1,500 hectares (3,655 acres) which consist of pumice mixed with lightly cemented volcanic ash. The pumice deposits are worked in a very primitive fashion by means of small quarries. The number of these is from 200 to 220, but most of them are worked only from May to October, two-thirds being abandoned during the winter months. At the time of greatest activity about 800 persons, including 100 women, are employed in the excavations. The pumice-stone produced is sold to merchants, who sort it according to colour, weight, and size, and send it to the town of Lipari to be cleaned and polished. The refuse and broken pieces are ground in hand mills to powder. There are sixteen recognised qualities and varieties of pumice-stone in the market, some of the finest qualities being used in cleaning and polishing works of art, other qualities for lithographic purposes, preparing leather, &c. About 290 workpeople, 120 being females, are employed in the factories engaged in the preparation and cleansing of pumice-stone for sale.

The Drug-trade in Puerto Rico.—Mr. E. B. Goico, writing in the *Alumni Report* on the above subject, is very enthusiastic over the fact that since the United States took possession of the island the importation of drugs from England, France, Germany, and Spain has practically ceased. While Puerto Rico was under Spanish rule only about 8 per cent. to 10 per cent. of the importation of drugs was of American manufacture, the bulk of the trade being in the hands of Spain; France furnished chemicals, patent medicines, and perfumery; Germany—fine chemicals, essential oils, &c.; England—raw products, powdered drugs, &c. Now the United States is straining every nerve to get the business into her own hands, and since the protective tariff went into effect local druggists have discovered that the European market is now closed to Puerto Rico, and the natural result is that America is now looked upon as the country's only purveyor. Drug-importing houses are therefore sending their representatives to the States in order to make new acquaintances and study the market. As showing the corruption and dishonesty that prevailed among the officials at the Custom-house under Spanish rule, Mr. Goico relates the following incident:—

> The drug-house with which I was connected, and of whose wholesale department I was the manager, imported every four to six months about five hundred 1-oz. bottles of sulphate of quinine from one of the most reputable drug-houses of Liverpool; the duty on this salt then being very exorbitant, in order to have the officials for you instead of against you, it was necessary, even against one's will, to declare and swear that the hogshead in which this quinine was coming contained simply "English barley," or some inexpensive salt, such as "Epsom salts," &c.

Alcohol had to be declared "turpentine," and if this was not done importers were liable to heavy fines. The duties which would naturally be paid legitimately to the Custom-house for quinine, alcohol, &c., were divided between the officials and the importer.

Australasian News.

Chiefly from "The Chemist and Druggist of Australasia," April 1, 1901. 6d. per copy, post free.

A Dispensing Mistake is recorded from Broken Hill, where an assistant gave 3 gr. of mercury perchloride instead of the same quantity of mercury subchloride. The mistake fortunately did not have fatal consequences, as treatment for poisoning was promptly applied.

The Victorian Formulary has suggested to the Councillors of the Pharmaceutical Society of New South Wales the advisability getting out a similar work. Mr. Mears, at the March Council-meeting, thought that something of a like nature would be of great use to the chemists and doctors of Sydney. The subject was also discussed at the annual meeting of the Society.

Imitating Steedman's.—Counterfeit labels and wrappers of Steedman's soothing-powders have been for some time in circulation in Australia. It has not been possible to trace the printers, so proceedings have been instituted against users of the spurious labels. Mr. J. G. Cooper, Lygon Street, Carlton, left for the country as soon as a writ was served on him, and had not been traced when the mail left.

A Pharmacy Act Case.—The Supreme Court, Wellington, was on February 21 appealed to by Mr. R. Ayres, a herbalist, to grant a mandamus to compel the N.Z. Pharmacy Board to register him as a pharmaceutical chemist without examination. Mr. Ayres was asked to read a prescription in court, and said it was a catchy one, and no chemist could read prescriptions right off without reference to his symbol-book. The Pharmacy Board won, but, having blundered in their proceedings, did not get costs.

A Case of Pilfering from wholesale houses is reported from Melbourne, in which a young man in the employ of Messrs. Felton, Grimwade & Co. stole goods from the warehouse, and sold them to a chemist who formerly employed him. The serious nature of the suggestions against the chemist were to be further gone into at an adjourned meeting of the Court.—At Perth, Western Australia, on February 21, a packer employed by Messrs. A. M. Bickford & Sons received four months' imprisonment for stealing pills, soap, and perfumery.

Unrealised Fears.—When the duty on patent medicines was reduced without notice by the New Zealand Government a few months ago, Mr. Kempthorne, managing director of the New Zealand Drug Company, estimated the company's losses on their stock at at least 16,500*l.*, and expressed the fear that the unfortunate shareholders would discover that he had rather under-estimated than over-estimated the amount. Nevertheless, the company, after paying the usual dividend of 7 per cent., carried forward a larger balance than in either of the two previous years.

The Chemical Society.

PROFESSOR EMERSON REYNOLDS presided at the meeting of the Chemical Society on May 16. The minutes of the previous two meetings were read, but before they were put to the meeting Dr. Armstrong said his objection was not correctly stated. He had called attention to the practice of the Chemical Society at Berlin, and asked that Dr. Perkin's paper be read, but the President ruled it was not competent to discuss a paper in the absence of the author. He also desired to protest against the English practice of putting letters after names. Some explanations ensued, and the minutes were passed on the understanding that they be amended on the lines indicated.

The President then announced that the resolution of the general meeting on the previous day had been laid before the Council, and that the Council are taking that important resolution into careful consideration.

Absent Authors.

Dr. Armstrong, referring to the ruling of the President at the last ordinary meeting, said perhaps he (the President) was not so fully cognisant of the working of the Society as others present. It has always been the practice to discuss papers in the absence of authors. By-law 14 says that all papers communicated to the Society belong to it, and gives complete liberty to discuss any paper. It is expressly stated that the discussion of each paper shall take place after it has been read. The *Journal* is to consist of papers that have been read before the Society, with the slight exception of important papers received between meetings.

The President said the by-law assumes the presence of the author, and this it was that governed his decision. He took it as a general principle that it is undesirable to discuss in detail a statement made by any absent person. There may, however, be some cases where the rule should not be made hard and fast.

Dr. Armstrong protested that it is introducing a new principle into the Society contrary to the practice of the last thirty years. Before the Royal Society, he said, papers are discussed whether the authors are present or not. The President's ruling was so contrary to the practice that they must not rest satisfied.

Dr. Perkin confirmed the last speaker by saying that discussion on papers had always in his experience been allowed whether the author was present or not.

Dr. Divers said for years his papers had been discussed in his absence, and he preferred objections, if there were any, to be raised even if he were absent.

Professor Dunstan tried to smooth matters by saying the by-law was passed at a time when it was possible to read all the papers presented to the Society. If they adhered strictly to the by-law they would need to read all the papers, and not abstracts, and would never get through them. "We have always taken the by-law as leaving a large power to the Chairman," said the Professor, as a parting shot.

Dr. Armstrong: "Who's we?"

Professor Dunstan: The Secretaries.

The President said he did not think the Chairman has power to prevent discussion on a paper. (Some amusement was caused here by Dr. Bloxam who said Dr. Armstrong prevented discussion on a paper of his some years ago.) Continuing, the President said whilst he is Chairman he will always be willing to allow any reasonable latitude.

The new Fellows present filed up and signed the roll of membership, after which the President called on Mr. Fenton to read the paper by himself and Miss M. Gostling on the

Derivatives of Methylfurfural

This was a continuation of work begun some two years ago. The authors had previously described the properties of bromomethylfurfural produced by the action of hydrobromic acid on certain carbohydrates. The substance has important bearings owing to its close relationship with sugar and its interest in connection with plant physiology. A substance has been prepared in which chlorine replaces the bromine by the use of hydrochloric acid. A crystalline product was after much difficulty obtained, called chloromethylfurfural, which had a remarkably low melting-point—36-37° C. It is isomorphous with the bromine derivative, and Mr. Fenton said it seemed remarkable that it should have been missed up to now considering the large number of experiments that have been made. The authors use filter-paper and hydrochloric acid, and obtain about 10 per cent. of pure crystals.

In a short discussion which followed it was suggested that methylfurfural might be given a short name. Dr. Foster suggested "Fental," but Mr. Fenton thought his colleague's name should be brought into it as well.

Mr. W. J. Pope then rapidly covered the blackboard in explanation of a paper by himself and Mr. Harvey on the

Preparation and Optical Inversion of Optically-active Nitrogen Compounds.

The substances dealt with were dextro- and lævo-a-benzyl-phenylallyl-methylammonium salts, and the nitrate and mercuri-iodide of those compounds. The point of the paper was that the optical activity of these asymmetric nitrogen compounds is very persistent, except under certain conditions, when inversion is caused.

Professor Armstrong favourably commented on the paper, in a speech almost as long as the paper, and Dr. Foster had some remarks to make. After this the bulk of the Fellows went up to coffee, those who remained being regaled with a paper by Mr. H. G. Madan on

Colloid Piperine,

with special reference to its optical refraction and dispersion. These properties were diagrammatically shown by wall-sketches. The fact of interest to pharmacists is that crystallised piperine when heated to its melting-point, 135° C., solidifies on cooling into a colloid form, resembling transparent resin. The colloid form reverts to the crystalline form in the course of a few months, but the change can be hastened or retarded by treatment at different temperatures.

Pharmaceutical Fauna.

The Bolivian Bird.

This graceful creature is dux of the drug-broking fauna, but is not often seen on the C.S.R. perch. It is devoted to the barks that come from South America, and such unconventionalt hings as kegs of iodine, crude cocaine, and beeswax. Its notes are dulcet and flight straight, but it is sparing with both.

A Story is told in one of the daily newspapers of a man who went to see a doctor. The doctor examined him carefully, and, with a grave face, told him that he was very ill, and asked if he had consulted anyone else. "Oh!" said the man, "I went to see a chemist, and asked his advice, and he——" "Chemist!" the doctor broke in angrily. "What was the good of that? The best thing you can do when a chemist gives you a bit of advice is to do exactly the opposite." "And he," the patient continued, "advised me to come to you."

Observations and Reflections.

By Xrayser.

The Old and the New

meet on pages 794 and 795 of last *C. & D.*, and suggest several topics for reflection. On the one hand we have some of the details of six chemists' failures; immediately following these are the records of the registration of five companies formed to carry on business as chemists and druggists. We may easily make too much of this fortuitous conjunction of the contending factions. The most powerful armies have their "casualties"; the six before us do not prove that individual chemists cannot compete against companies. The reports all reveal a pathetic story of years of anxiety and struggling, with no reward at the end. But the reasons for the failures are on the surface. All the combatants were handicapped throughout by the want of a capital. This is the lesson of the two pages: sufficient capital and its judicious but liberal employment are essentials. The Irish company which proposes to run a medical hall with 150*l.* capital perhaps relies on the exceptional talent of its principal promoter; but generally with companies a fair sum is subscribed, and in any case the adventurers in these enterprises are not burdened with the anxiety of the individual who sees his little all vanishing.

The Validity of the Contract

made between Messrs. Elliman and certain of their customers was obvious to Mr. Justice Kekewich, and it is difficult to understand how anybody could have thought it doubtful enough to be worth risking a lawsuit over. The thanks of the trade are, however, due to Messrs. Carrington & Co. for providing a case which has established the legality of anti-cutting agreements. Courts will not nowadays set aside contracts made between grown-up people unless it can be proved that these contemplate or lead to the commission of some illegality, or unless their effect may be to deprive one of the parties of the chance of earning his living. The theory of cancelling a contract which would carry the latter result is that it is contrary to the interest of the State to maintain idle people; it is the interest of the community which is considered. It is, therefore, a compliment to Messrs. Elliman that there should be cutters who are willing to fight a costly contest in order that the public shall be able to get their valuable embrocation at a penny less than the advertised price. It is possible that if the protected article had been bread or milk, or even the sacred beer, the Court would have looked at the agreement more anxiously before endorsing it.

The Camberwell Chemists,

in public meeting assembled, with an L.C.C. in the chair, have made their demonstration, but it is not quite clear what they are going to demand from their Borough Council. Are they going to contend that carbonate of magnesia is "magnesia"? Or, if they admit that it is not, is it their case that they, being chemists, should be allowed to sell the carbonate for the calcined whenever it is their good pleasure so to do? Into one of these two positions their complaint must resolve itself if the deputation to the local Council should be pressed to lay down a specific claim. These aggrieved pharmacists would have been wiser, I think, to have nursed their indignation in silent dignity. The prosecutions in the police court were cleverly defended, and even those chemists who were fined must have gone away proudly conscious of the integrity which their counsel had insisted on, and which the Magistrate had admitted. To "abuse the plaintiff's attorney" after that result was rather unreasonable, and, I should have thought, a little unwise. The best course would have been to lie low, say nuffin'—and sell mag. calc. in future when magnesia was asked for.

The Symbol of Pharmacy

which adorned the Pharmaceutical Society's dinner-ticket was a pestle and mortar set on a green-and-black velvet cushion. It was the same old pestle and mortar as the one used as a crest over the arms of the Pharmaceutical Society. It is right that the Society should thus (to use heraldic language) blazon its calling. Not many of the diners had much practical acquaintance with the pestle and mortar; perhaps not twenty of them had touched the implements in ten years. Still, it is gratifying to find that though we have risen to the rank of a learned body, almost to that of a faculty or an academy, our chiefs are not ashamed of the tools which at one time, within the memory of living pharmacists, did suggest the hard work of a chemist's shop.

The Pestle and Mortar

has been the characteristic symbol of pharmacy from the remotest times, and amid all nations. But there are other symbols which better lend themselves to artistic display, and are more suggestive. The phœnix, which has descended to us from the alchemists, is full of metaphor. For a dinner-ticket it would have been a peculiarly appropriate ornament, reminding the guest of the return to business next morning. The serpent of Æsculapius, the caduceus of Mercury, the alembic, or the five-rayed star would either of them have figured more gracefully on the ticket, but these belong rather to medicine than to pharmacy. In this connection I would like to know why a dove with an olive-branch came to be adopted for one of the quarters of the shield in the Pharmaceutical Society's arms. I appreciate its appropriateness to many of us individually, but I know of no legend which specially associates it with either pharmacy or medicine as a professional emblem.

The S rplus

of income over expenditure which, thanks to the high fees now extracted from examination candidates, promises to be a permanent feature of the Pharmaceutical Society's annual finance, should be spent for the benefit of the trade generally. That was the argument suggested last week. The Society, its Councils, and its officials generally should be first maintained in the conditions of luxury to which they have become accustomed. That seems only fair towards the people who have worked up the business. But with the balance some special service should be rendered to the community which actually furnishes the funds. The effective administration of the Pharmacy Act, and whenever necessary the amendment of that statute, are obviously the first duties that present themselves. But these accomplished, there still remains some

£2,000 to be Disposed of.

No way of spending this seems more suitable than the protection of the trade from legal injustice whenever action can be discreetly taken. The selection of cases to defend would, of course, be a subject for the serious consideration of the Council, but there are many as to which we should all agree. There is mercurial ointment, for example. Would not the Society render a valuable service to the public as well as to the trade by supporting with all its influence and prestige the next defendant who may be summoned for selling under this name the weaker article? Such a case as that of the title of "veterinary chemist," which the *C. & D.* once maintained, is another exemplary specimen; and oppressive threats, if any should be made by professional bodies who aim to restrict the well-established rights of chemists, and similarly the unfair pretensions of wealthy firms in regard to proprietary rights, might be sometimes resisted. That "eye trade-mark case" seems to offer, *primâ facie*, features for, at least, investigation.

Editorial Comments.

Wednesday's Meeting.

THE Pharmaceutical Society is particularly fortunate in its presidential understudies, Mr. Newsholme's illness having given the members an opportunity of judging how Mr. C. B. Allen can conduct the business of the Society, and so far as public appearances go there is justification in considering that the second sixty years of the Society's existence may be launched with a second Allen at the helm. The annual meeting was as uneventful as the dinner on the previous evening was commonplace. Mr. Mackenzie, of Edinburgh, was the only one who attempted criticism of the Council's business, but the meeting followed his fundamental charges with difficulty, and was clearly out of sympathy with him when he boldly alleged that the payment of annuities by the Council

is *ultra vires*. This was on account of sympathy with the present recipients of pensions, the right or wrong of Mr. Mackenzie's statement apparently not being taken into consideration. We think it should be in order that the legality of annuities may be established. The charter gives the Council power to appoint, remove, and reappoint all subordinate officers of the Society, and to appoint a secretary, but no authority is given in the charter to pay these persons salaries, let alone annuities. Section iv. of the 1852 Pharmacy Act, however, empowers the Council to pay suitable salaries to the Registrar, Deputy-Registrar, clerks, and officers. It happens that the General Medical Council has similar power in the Medical Act, 1858, to appoint registrars, each of whom "shall be paid such salary as the Council shall think fit." When Mr. Miller retired from the English registrarship in 1897, it was proposed to grant him an annuity; but at the last moment the Council were advised that they have no power to do so, "annuity" not being "salary" in the sense of the Act. Considering the similarity between the powers of the two Councils, it is apparent that there is a case for inquiry.

Mr. James Paterson redeemed his promise of testing the validity of this year's nominations for the Council by handing in a nomination-paper which the Secretary received and promptly ignored, without a word of protest from Mr. Paterson. We gather that the nomination-paper contained the names of seven members of the Society, and that Mr. Paterson considers it the only legal nomination this year. The privilege remains to him of proving his point in the High Court of Justice; but we cannot understand how a canny Aberdonian should throw away the splendid opportunity of demonstrating his case to the members of the Society for nothing. Perhaps he expected that the executive officers of the Society would help him, but he now knows that they are far too clever to give the least bit of assistance to an opponent. We do not blame them: it is the rule of the game; and they would have been unwise to have fired their artillery before Mr. Paterson had unmasked his batteries, which he never did.

The Vice-President's speech in moving the adoption of the report was above the average. As a diligent reader of this journal he took care to supply some of the omissions from the report to which we called attention on May 4, and defended well those omissions which he did not repair. Somewhat vehemently, and amidst hearty applause from the front rows, he protested against criticisms of the Society's finances which are based on separation of the departments of the Society's work. We must take them all together—examination-fees, members' subscriptions, and school-fees. Naturally so. That is best for the Society; but it does not get rid of the fact that, when a few years ago the Council was dropping about 4,000*l.* a year in an acknowledged speculative commercial venture for the benefit of the members of the Society only, and nobody else, instead of appealing to the members for financial assistance, the Council sought and obtained powers to double the Minor examination-fee. In this way large annual deficits have been converted into equally large surpluses, and members of the Society are now telling the Council how they should spend the surpluses. On what? Perhaps encouraging provincial education, or something good for the craft generally. Not at all: on things that are reserved for the members. It would be good for Mr. Allen and his colleagues if they would take a wider view of the responsibilities which the 10*l.* 10*s.* examination fee has imposed upon them. We do not grudge the Society and its members any advantage which their statutory position affords them, but it is high time that the Council should look beyond the borders of the Society in the bestowal of their favours. The abolition of the Preliminary examination makes it certain that in future the greater majority of youths in pharmacy will not affiliate themselves to the Society until they qualify. Some scheme for providing these youths with the means of systematic instruction until the final "grind" is a necessity, and the wherewithal exists in the large surpluses provided by the examination-fees. This, with probably other matters outside the Society's affairs so-called, should be an early consideration of the Council. It is such things that critics have in view, and there is much to be said for their contention that the income of the Society derived from the examinations throws upon the Council a responsibility to the whole trade, which is not discharged with the act of registration. The Society is not only a voluntary body but a national institution, with responsibilities equal to those of a department of State, and it should be as catholic in administration and effort as a State department.

Production of Quicksilver.

Dr. Alois Weiskopf has recently communicated to the *Zeitschrifte für Chemie* some useful information in regard to the production of quicksilver, which occurs in nature as a cinnabar HgS, in combination with sulphides of copper, silver, and iron. It is found in sedimentary stone formations in Almaden, in Spain, similarly at Huancaorlia, in Peru, and in Idria the same mineral occurs between the strata, and also mixed with bitumen and earthy deposits. Other important sources are the mines of the Napa Consolidated Quicksilver Mining Company at New Almaden, New Idria, Altoona, and Ætna, all in California, where the cinnabar is mixed with serpentine, trachite, and basalt, and their adjacent chalk-formations. It is also found at Kotterback and Dobschau, in Hungary, and at Monte Amiata, in Tuscany, as cinnabar; at Cornacchino and Montebuono as an ore containing from 0·4 to 1·2 per cent. of mercury. In Russia, at Nikitowka, in the district of Bachmunt, a cinnabar is mined which is similar to that of Almaden, the ore yielding from 0·6 to 20 per cent. of mercury.

The United States of America produced in 1898 31,092 bottles of mercury, worth $1,188,627, and in the year following 638 bottles less, but owing to the market condition the value in the latter year was $264,118 more. The prices in 1899 were the highest since 1890. In January, 1899, mercury was selling in San Francisco at $42 per bottle (76½ lbs.) for home use and $37.50 for export; but in December the prices had advanced to $51·50 for home use and $47 for export. During the past twenty years all the American quicksilver has come from California, except 65 bottles from Oregon in 1887, and Texas during the last year or two has supplied 1,000 bottles from the Terlingua quicksilver-mining district. In Hungary the Rima Muranyer Gewerkschaft, including Dobschau, produce about 1,000 kilos. per annum. The Russian output is calculated to be 200,000 pouds of mercury, 1 poud equalling 16·38 kilos. From statistics collected by the Metal and Metallurgical Society at Frankfort, it appears that the world's production in 1899 was as follows:—

	Tons
Spain	1,357
United States of America	993
Austria-Hungary	500
Russia	360
Italy	206

The production for the ten years ending 1899 is shown by the following table, the figures as to quantities referring to metric tons:—

Year	U.S.A.	Spain	Austria-Hungary	Russia	Italy	Total	Price in London 1 bottle = 34·5 kilos. Highest	Price in London 1 bottle = 34·5 kilos. Lowest	Price in San Francisco 1 bottle = 76·5 lbs. Highest	Price in San Francisco 1 bottle = 76·5 lbs. Mean	Price in San Francisco 1 bottle = 76·5 lbs. Lowest
							£ s. d.	£ s. d.		$ c.	
1890	796	1,819	542	292	449	3,898	10 7 6	8 17 6		52 01	
1891	794	1,790	570	324	330	3,803	9 0 0	7 5 0		43 29	
1892	971	1,657	542	343	325	3,838	7 15 0	6 1 0	$ c.	38 80	$ c.
1893	1,047	1,665	512	200	373	3,697	6 17 6	6 2 6	43 50		30 0
1894	1,056	1,609	519	196	258	3,638	6 15 0	5 10 0	37 0		27 50
1895	1,179	1,506	535	434	199	3,835	7 7 6	6 7 6	41 0		35 90
1896	1,036	1,524	564	492	186	3,802	7 5 0	6 8 6	40 0		35 50
1897	965	1,728	532	617	192	4,034	7 7 6	6 12 6	40 50		35 50
1898	1,059	1,691	491	362	173	3,775	7 15 0	7 0 0	42 50		38 0
1899	993	1,357	500	360	206	3,416	9 12 6	7 15 0	51 50		40 0

In addition to the sources already named, Mexico, China, Japan, Chili, and Peru also contribute to the quicksilver supply, but the amount cannot be accurately ascertained. Thus in Mexico there is a large number of small mines worked by proprietors who do not lay open their statistics; but apart from these the following has been the production in metric tons:—

1893	1894	1895	1896	1897	1898	1899
286	300	213	218	294	535	324

To this information by Dr. Weiskopf, we may add that the importations into London for the five months of each season to April 30 have been:—

	1901 Bottles	1900 Bottles	1899 Bottles	1898 Bottles	1897 Bottles
Government Spanish ...	33,387	—	24,992	29,996	34,999
Other Spanish	39	19	5	106	178
Italian	1,680	2,420	2,602	2,150	2,300
Austrian	—	—	—	—	—
Californian, Borneo, Russian, and indirect import	—	—	80	814	—
	35,106*	2,439	27,679	33,066	37,477

The exports from London for the five months of each season to April 30 have been:—

Bottles	8,850*	12,014*	13,967	12,658	11,803

Since the beginning of this year there has been an entire absence of any fluctuation on the London market. Indeed, it is necessary to go back to September 7, 1900, for a move, when the quotation was reduced 2*s.* 6*d.* per bottle to 9*l.* 2*s.* 6*d.* The absence of these fluctuations has put an end to the profitable turnover of quicksilver in second-hands, and the bulk of it is now sold at or under a commission of ½ per cent. This is unfortunate for the middleman who bought and sold quicksilver, as the importer in many cases deals direct with the merchant, and in one or two instances where second-hand stock is held at 9*l.* 5*s.* the holder is hoping against hope that the sudden market fluctuations which used to be peculiar to quicksilver will occur again. The quotation of 9*l.* 2*s.* 6*d.* is, we understand, "pegged," and it will require some important movement in the market to alter it. It may be taken that the concession which Messrs. Rothschild gave to second-hand dealers, by which a margin of, say, 6*d.* to 2*s.* 6*d.* per bottle was fixed between the official and the second-hand price, has been abolished in consequence of the firm having had to pay a larger sum for working the Almaden mines, the ten years' lease of which was renewed last July.

* Estimating April at 2,000 bottles

The Sweet Spirit.

For seven centuries sweet spirit of nitre has been in use as medicine, and has been criticised by representatives of alchemy, chemistry, and pharmacy—a distinction which no other popular medicine shares with it—and still there is something to learn about the spirit. It was in the thirteenth century that sweet spirit of nitre was first heard of, or the first record of it was made, and those who are familiar with "Pereira" may recall that Raymond Lully was the man who mentioned it. The history of the spirit was graphically told in 1865 by the late Mr. Robert Warington, F.R.S., F.C.S., when, as an expert, he was called in by the British Pharmacopœia authorities to extract them from the mess that their 1864 formula got them into. Recently the United States Pharmacopœia Revision Committee has published privately a more thorough record by Messrs. W. O. Richtmann and J. A Anderson, which is substantially a bibliographic index from Lully's time to 1899. Two-thirds of the work done on the spirit has been during the past generation, but most of this two-thirds has been in respect to keeping the medicine and valuing its activity. In the earlier days, even in the sixteenth and seventeenth centuries, those interested were more concerned with the preparation of the spirit, for it was ever the pride of the craftsman to select his materials carefully and to compound them well, whether a door or a dose was the end he aimed at. So we find in regard to sweet spirit of nitre that Lully's recipe, as improved by Basil Valentine—viz., the action of nitric acid or spirit of nitre upon alcohol—has remained, with slight modifications, the approved process throughout seven centuries. Gmelin, in the eighth volume of his well-known work on chemistry, published in 1860, pointed out that up to that time the spirit had been made by one of seven processes, whose nature may be gathered from the following:—

(1) Fuming nitric acid and alcohol, cold.
(2) Fuming nitric acid, alcohol, and water.
(3) Nitric acid and alcohol, distilling.
(4) Sulphuric acid, alcohol, and a nitrate.
(5) Nitric acid, alcohol, and a reducing substance.
(6) Nitrous acid on alcohol direct.
(7) Sulphuric acid, alcohol, and saltpetre (ord temp.).

Gmelin omitted reference to one of the best methods, suggested by R. Hare, an American, who, in 1839, prepared a "new ether," really ethyl nitrite, by mixing potassium or sodium nitrite with alcohol and sulphuric acid. Hare was probably the first one to make a relatively pure hyponitrous ether, and his process became a failure in the 1864 B.P., because the sodium nitrite of the day was chiefly sodium carbonate; but with pure nitrite it, in 1888, became a workable process, on the suggestion of Dunstan and Dymond.

The 1864 failure was, nevertheless, the turning-point in the matter, as it helped to drag investigators from the traditional empiricism, and set Warington and Redwood to work independently. Redwood devised the 1867 B.P. process, on the lines of No. 5 method, using copper instead of Liebig's starch (1839) and E. L. Jonas's iron filings (1850), although the latter is an equally good process, and is still worked on the manufacturing scale. The composition of sweet spirit of nitre received more attention than its decomposition, at least, until recent years. The first to look into the latter aspect appears to have been Stoltze, who, in 1819, condemned the accepted method of "purifying" the spirit with magnesia. This purification was to free the spirit from acidity, and until Stoltze's warning the free acid in the spirit was not considered to be a product of decomposition, but an impurity incidental to the method of preparation. Little progress was possible in regard to decomposition until a method of determining the amount of ethyl nitrite in the preparation was obtained. The only method employed up to the 1867 B.P. was to salt out the ethereal liquid by saturating the spirit with calcium chloride, and by this method the official spirit was expected to show 10 per cent. of "hyponitrous ether," although the nitric radicle employed in the formula could not possibly give much more than 3 per cent of ethyl nitrite. Estimation with permanganate, directly and indirectly, was tried, and, sad to tell, the earliest convictions under the Sale of Food and Drugs Acts were based upon this entirely inaccurate method. In 1882 Professor J. F. Eykman utilised the reaction between ethyl nitrite and ferrous sulphate as a means of accurately determining the amount of nitrite. He performed this test by boiling acidulated solution of the sulphate in a flask in order to drive out all air, then closing it, and introducing a known volume of the spirit of nitre, when the familiar black compound of ferrous sulphate and the nitrous radicle was formed, he again heated the contents of the flask, and the nitrous oxide was driven off and measured. By means of this method various investigators were enabled to report more precisely upon the changes which occur in the spirit when kept, and the era of revelation began with a paper by Dr. W. H. Symons in 1883. Two years later Mr. A. H. Allen devised the nitrometer method, based upon the interaction of ethyl nitrite and potassium iodide in an acid solution, and this again gave an enormous impetus to the research; so that during recent years it has fairly been established that keeping sweet spirit of nitre in the shop-round is a sure method of providing the public with a most variable or impotent medicine. Several investigators, especially A. Meldrum in 1893, have pointed out that light plays an important part in the decomposition of the spirit, but no one has gone into the matter so fully as Mr. Harvey in the paper which we publish to-day. He shows that light is by far the most potent of the influences in determining decomposition, for even in hermetically sealed vessels completely filled with the spirit, decomposition takes place in the course of time, with entire destruction of the ethyl nitrite. Light, therefore, it appears, is the influence that should specially be avoided, and it will be observed that Mr. Harvey has proved that amber-glass bottles reduce this influence to practically *nil*. Volatilisation is the next important factor in causing the spirit to deteriorate. The data which are given under this head will be found to be especially valuable in reference to the sampling of the spirit for purposes of the Sale of Food and Drugs Acts, and the author shows that unless the sample is divided into quantities which completely fill the light-tight bottles, it is impossible to submit them to the analyst in the same state as the spirit has been sold. The influence of oxidation is also considered in the paper, and, strange to say, it is far less than has hitherto been supposed. We commend consideration of Mr. Harvey's article to all who are interested in the sweet spirit, for to the manufacturer, wholesaler, and retailer, the preservation of this medicine has been one of the greatest worries during the past twenty years, and the investigation indicates the conditions under which it may be kept in at least a fairly constant condition.

LOOK TO YOUR LINSEED OIL.

A correspondent in North London informs us that linseed oil is the latest "food or drug" the purity of which is vexing the eagle-eyed food-and-drug inspector of his district. Our correspondent was visited the other day by a man who brought a jug and asked for a pint of linseed oil. The pharmacist inquired whether it was for a horse or for what, but could get no satisfactory answer. He thereupon mentioned the price as a preliminary, and measured out a pint of the oil. The jug would barely hold the 20 oz., and the chemist was discussing with his customer as to how he was going to carry the quantity away without spilling it, when the inspector rushed in and explained that the oil was for analysis. The object, however, is evidently not only to test the quality of the oil, but also to ascertain whether or not the correct measure is given.

REVIVAL OF PILEWORT.

The use of the pilewort or lesser celandine (*Ranunculus Ficaria*) for hemorrhoids is being revived by Sir James Sawyer. It appears this distinguished Birmingham physician was led to try the old remedy as an application for piles from the study of old herbals, "with prosperous therapeutic results," to use his own words. To prepare the ointment the whole plant is gathered when in bloom in the spring, cut up, and macerated at 100° F. in lard for twenty-four hours, the lard being in the proportion of 3 parts to 1 part of the plant. At the end of that time the herb is pressed and the ointment cooled. The result is a "bright-green olive-green" ointment, which is applied to the affected parts twice daily, preferably just after an evacuation. The ointment is known as unguentum ranunculi ficariæ, or it is suggested that if made with a basis of wax and oil it could be literally called "celandine cerate." This latter suggestion seems to involve altering the formula merely for the purpose of getting a pleasantly alliterative title.

AN UNDECIDED POINT.

The whole trade will appreciate the efforts of Messrs. Elliman, Sons & Co. to secure a decision as to the legality of anti-cutting agreements, and the majority will be gratified that the view that these agreements are void because they are in restraint of trade has been shown to be erroneous. It is now clear that an agreement whereby a person undertakes, in consideration of his being allowed to obtain goods at trade prices, that he will maintain specified conditions of sale can be upheld. It is to be regretted, however, that another point, argued in the case, was left untouched by the judgment. Messrs. Walker corresponded with Messrs. Elliman direct in 1898 and signed the agreement with them. They broke that agreement and Messrs. Elliman closed their account. In 1900 they obtained Elliman's embrocation from Carrington, and signed a similar agreement to that which they had previously signed in 1898, the whole of the correspondence and transaction, however, being between Carrington and Walker. It was part of Messrs. Elliman's case that this second agreement was an agreement between them and Walker, obtained for them by Messrs. Carrington as their agents. This was strenuously objected to by the defence, their case being that the latter agreement was one made between Carrington and Walker, and that the only people

who could sue upon it were Messrs. Carrington. The Judge asked Messrs. Elliman's counsel whether he relied upon the 1898 or 1900 agreement, and the reply was that he relied upon both. It would appear from the judgment that his Lordship decided upon the 1898 agreement only. It would have been useful if the position in regard to the 1900 agreement had been made clear. The majority of anti-cutting agreements are obtained by wholesale houses. It is important to know whether it is the proprietors or wholesalers, or both, who can sue in such cases. In any event we would advise proprietors to have their agreements so worded that there can be no doubt about the contracting parties. It should be made as between the proprietor and the person signing it.

HOSPITAL-WORK ON A TRANSPORT.

A letter received by us from a registered chemist and druggist, who went out a few weeks ago as a volunteer combatant to South Africa, throws a lurid light on the medical arrangements in vogue on board military transports. Our correspondent sailed in a steamer, once used for cold-storage transit purposes, but then carrying over 1,000 men, for whose medical requirements there were two doctors, one compounder, a lance-corporal, and an orderly of the R.A.M.C., with two young stretcher-bearers as assistants. The hospital which was close, badly ventilated, and noisy, consisted of thirty-two beds. The lance-corporal in charge was a willing enough young man, but with absolutely no idea of how to conduct a hospital. Our correspondent continues :—

The doctors appeared to look on the hospital as a nuisance to be endured for as short a time as possible daily. Their average attendance in the morning was from five to ten minutes, and during that time they saw all the in-patients and from thirty to forty out-patients! At one time nearly every one of the thirty-two beds was filled, but they attended to them all in the usual five minutes. There was one poor fellow suffering from pneumonia who afterwards died, whom I saw one afternoon, when he appeared to have taken a slight turn for the better, eating bread and cheese of all things in the world. I was not surprised next day to hear that he had had a very bad night. He had no proper nourishing food until he was practically dying, whereas, had it been given earlier, I, as well as others, believe his life might have been saved. One morning as the colonel was on his rounds, he came to this poor fellow and said, "Of course you are having chicken and soup, and that kind of thing?" To this he did not reply, and it was not until after this and a few days before his death that he received anything of the kind. Another patient recovering from fever had a piece of dry bread and a "kipper" placed before him for breakfast one morning before he had gained sufficient strength to walk, and he could obtain nothing better until the orderly went to the cook and begged for a decent meal for a sick man. This had to be done on several occasions. There were chickens, turkeys, and all kinds of luxuries on board for the officers, but, instead of the doctors ordering these for the sick, no notice of the diet was taken for some days, and it was left for the orderlies to beg for proper food. As a rule, unless the orderly mentioned it, the doctor made no inquiry as to what food the patients were having, so they had to do the best they could with that supplied to the rest of us.

If this state of things be the rule instead of the exception, it shows that, spite of the indignant assertions to the contrary, our military medical service remains a scandal and disgrace to the country.

A Record Sale of Chicle.—An enormous sale of 2,000,000 lbs. gum chicle to the American Chicle Company is reported from New York. The purchase was made for the so-called chewing-gum combine, and will be shipped to eight factories. Mr. Henry Rowley, secretary of the American Chicle Company, interviewed by the *Commercial*, confirmed the purchase, and claimed that it was the biggest single sale of the kind on record. The price paid for the chicle was understood to be about 40c. per lb. Figuring upon this basis, the entire lot of 2,000,000 lbs. was worth about $800,000. Chicle is the exudation of the *Sapota Muelleri*, a tree especially indigenous to Yucatan, Mexico. Thousands of native labourers are engaged in the industry, which consists largely of boiling and drying processes.

The Spectacle-makers' Company.

THE May examination for diplomas as opticians held by the Spectacle-makers' Company was opened at the St. Bride's Institute on May 15. Following the custom at the former examinations the candidates were addressed by the Master of the Company (Sir Wm. Hart-Dyke). He said that, although an examination always produced a wholesome terror in his mind, he is a great believer in the examinations as tests. The optical trade is an important one, and, although the efforts of the Spectacle-makers' Company have covered a very wide area, 324 diplomas have been issued, and they are satisfied that good progress is being made with the scheme. Sir William then referred to the question of technical education. As a nation, we are very backward in this matter. Other countries appreciate the importance of it years ago, and know the value of the application of science and art to special industries, and, indeed, to all industries—Germany, Switzerland, and France, and in America also, very great strides were made—and while we were only talking in Parliament and out of Parliament as to what we were about to do, other countries had grasped this idea, considered it, and brought it to a practical result. His opinion was that if there is a trade or industry in this country in the prosecution of which the application of science is necessary it is that of the optician, and yet how many young men have plunged into this trade without ever having attended an evening continuation school or an institute, or gone through any educational process whereby they might get even a glimmer of the very earliest principles of the sciences which underlie this great trade.

Mr. Thornthwaite (past-Master) moved a vote of thanks to the Master for his address, which was carried by acclamation.

The following were the questions set in

General and Visual Optics.

1. Describe with sketches the way in which a concave lens forms an image of an object placed near it; and show the paths of the particular rays which, starting from the top of the object, reach the eye.

2. Two lenses of respective focal length of + 12 inches and + 10 inches are placed 2 inches apart. What will be the focal length of the equivalent lens, and how far will the principal focus of the combination be from the back of the second lens?

3. Calculate the powers of the following lenses:—

(*a*) Plano-convex of radius 24 inches, of crown glass having refractive index $\mu = 1{\cdot}52$.

(*b*) Biconvex of radius 8 inches both faces, of flint having refractive index $\mu = 1{\cdot}67$.

(*c*) Meniscus lens of radii + 8 and − 12, of light phosphate crown, having refractive index $\mu = 1{\cdot}497$.

4. What is spherical aberration? Under what circumstances will a plano-convex lens give less spherical aberration than an equi-convex lens of the same power? Under what circumstances will an equi-convex lens give less spherical aberration than the plano-convex lens of the same power?

5. Show how a prism can be used to do the following things: (*a*) to reflect light in a direction at right-angles to its original path; (*b*) to reflect light back in a direction parallel to its former path. Why do the prisms so used produce no dispersion?

6. Explain why an emmetrope requires glasses for reading when he has passed middle life. Give approximately the glasses required in such a case for reading at 14 inches for every fifth year, commencing at 40 until he reaches the age of 80 years.

7. Explain the meaning of the terms *Anterior principal focus*, *posterior principal focus*, *principal points*, and *nodal points*. Under what circumstances do the *principal points* and *nodal points* coincide? What is the size of the retinal image of an object 5 centimetres long and 10 metres away in a myopic eye of 3 D; the myopia being due to axial elongation of the globe.

8. Where is the *P. Remotum* in myopia and hypermetropia when they can be corrected respectively by a − 6 D and + 4 D lens placed 13·5 mm. from the cornea?

9. A man aged 60 sends the following prescription for distant vision:—

R.E. $\frac{-0{\cdot}5\ \text{DS}}{-4\ \text{DC ax. 90.}}$ L.E. $\frac{-1{\cdot}75\ \text{DC ax. 110 vert.}}{+\ {\cdot}75\ \text{C ax. 20.}}$

He requires, in addition, glasses to enable him to read at 14 inches. Write the prescription and explain how you obtain it, and give your reasons for making it up in any particular form.

10. A lens of 2-inch focal length is decentered 3·5 mm. What is the prismatic effect represented by degrees of prism angle, by degrees of deviation, and by prism dioptres?

Causes of Instability in Ethyl-nitrite Solutions.

By T. F. Harvey, Ph.C.

ALTHOUGH the literature concerning spt. æth. nit. is somewhat extensive, and although it is commonly assumed that depreciation in strength of this preparation is due to the combined agency of evaporation, heat, light, and oxidation, yet I am unaware of any recorded attempt to separate and define the effect of each of these several influences. Their relative value as promoters of decomposition is not understood, and the specific effects which may be due to them are at present obscure. This paper embodies the results of work done with a view to lessen this obscurity. Peculiar difficulty attends that portion of the work in which it is sought to ascertain the effect of contact with atmospheric oxygen, for one is confronted with the inevitable loss introduced by the extremely volatile nature of the substance, making it impossible to obtain other than comparative results.

In some of the earlier experiments spt. æth. nit., B.P., and also solutions of ethyl nitrite in alcohol were made use of —later, ethyl-nitrite solutions only were used. This was done in order to narrow the issues, and because it is evident that decompositions occurring in a plain alcoholic solution of ethyl nitrite are also likely to occur in spt. æth. nit., B.P. Moreover, it is now generally conceded that, as was shown by Leech, the therapeutic value of these preparations is due to the ethyl nitrite, and solutions of this substance seem likely, therefore, to displace spt. æth. nit. in course of time. The most striking fact brought out during these experiments was the very powerful and remarkable action of sunlight. Light has long been regarded as exerting a deleterious influence, the extent of which, however, seems to have remained largely unsuspected. Attention has recently been called to the matter by Gilmour in a paper in which he warns chemists of the dangers of a strong light (*C. & D.*, January 19, page 81). The action of water was also partially investigated and furnished a ready explanation of the rapid loss in strength of solutions in weak alcohol.

Preliminary Experiments.

A number of glass tubes were prepared with drawn-out ends, one end being sealed; also some stout flasks with drawn-out necks ready for sealing.

Into one set of these was run spt. æth. nit., B.P, and into the other a solution of ethyl nitrite in 90-per-cent. alcohol. The tubes were filled to within about 1 inch of the narrow end, and at once sealed in the blowpipe-flame—the flasks were partially filled and sealed. Different tubes were then submitted to various influences during a period of seven or eight months, and at the end of that time examined, with the results shown in the table below, in which the noteworthy features revealed are :—

1. In full sealed tubes protected from light both solutions keep, at any rate, fairly well, during a considerable period of time. The erratic variation in the tubes of spt. æth. nit., B.P, is noteworthy, as they were kept in the same box of sawdust, and I am unable to assign any external cause for it.

2. Heat, in the absence of light, does not promote decomposition (volatilisation being of course prevented). The tubes exposed to heat show a smaller percentage of loss than those kept in a cool place, but they were not kept for quite so long a time.

3 The action of daylight is highly injurious, the solutions containing no trace of nitrite when examined. They were under considerable pressure, and evolved a moderate quantity of gas, which will be again referred to.

4. The presence of a relatively large air-space determines appreciable loss of nitrite and increased acidity. Here, again, the results are more variable with spt. æth. nit. than with ethyl-nitrite solution. A slight increase in sp. gr. also occurred.

5 The addition of water diminishes the keeping-qualities of ethyl-nitrite solution.

It may here be mentioned that $\frac{n}{10}$ aqueous NaOH probably does not give a true measure of the acidity, especially if the latter be appreciable, inasmuch as the addition of water causes immediate decomposition of some of the nitrite. Probably alcoholic KOH gives a correct result.

Further experiments were then made to ascertain whether either rapid or slow oxidation took place by reason of con-

Date of Analysis	Conditions of Storage	Spt. Æth. Nit., B.P.					Sol. Ethyl Nitrite in 90-per-cent. Alcohol			
		No. of Tubes	Sp. Gr.	C.c. $\frac{n}{10}$ NaOH Required by 10 c.c.	C.c. NO at 15·5° C. and 760 mm. from 5 c.c.	Per Cent. of Loss	Sp. Gr.	C.c. $\frac{n}{10}$ NaOH Required by 10 c.c.	C.c. NO at 15·5° C. and 76 mm. from 5 c.c.	Per Cent. Loss of Nitrite
September 12, 1899	Original	—	0·8380	5·5	36·3 / 36·5	—	0·8365	1·9	35·9 / 35·8	—
April, 30, 1900 ...	Full tubes exposed to ordinary daylight on laboratory table	*a*	—	about 6	0	100	—	about 2	0	100
		b	—	about 6	0	100	—	—	0	100
		c	*	*	—	—	—	—	—	—
April 30, 1900 ...	Full tubes exposed to heat, kept in sawdust (near steam-pipes for some weeks)	*a*	—	6·2	35·2	3·3	—	1·3	35·5	—
		b	—	6·8	36·0	1·1	—	*	*	—
		c	*	*	*	*	—	—	—	·8
May 28, 1900 ...	Full tubes kept in sawdust in cool place ...	*a*	—	6	34·4	5·5	—	1·6	34·1	4·7
		b	—	6·2	28·4	22	—	1·2	33·5	6·4
May 28, 1900 ...	Flasks one-fifth full, kept in sawdust in cool place	*a*	—	11·3	26·4	27·5	—	—	27·2	24
		b	—	10·3	27·2	25·3	0·8378	6	27·4	23·5
		c	0·8385	9·7	29·4	19·2	—	—	—	—
							Sol. Ethyl Nitrite + 10 per cent. Water.			
September 12, 1899	Original	—	...	...	...	...	—	—	30·2	—
May 28, 1900 ...	Full tubes kept in sawdust	*a*	...	...	...	...	—	1·8	26·0	13·9
		b	...	...	...	...	—	1·8	26·0	13·9

* Burst.

tact with the atmosphere; also the effects produced by light and water were more fully investigated.

Effect of Light.

The action of daylight proved to be truly surprising. On June 1, 1900, a solution in absolute alcohol, of which

{ 5 c.c. gave 35·0 c.c. NO at 15·5° and 760 mm.
{ and 10 c.c. required 0·2 c.c. $\frac{n}{10}$ NaOH,

was exposed over mercury to the light from a north window in an apparatus so arranged that either the evolved gas or the solution could be removed and examined at will, from time to time.

The mercury quickly became coated with a film, which did not appear to increase after a few days.

Under these conditions, not exposed to any direct sunlight, the solution took ten weeks to thoroughly decompose. At the end of that time it contained no nitrite,

and 10 c.c. = 0·6 c.c. $\frac{n}{10}$ NaOH.

The gas was found to be slightly soluble in water and to consist largely of nitrogen. On August 18, 1900, a further quantity of solution in absolute alcohol was exposed to direct sunlight over paraffinum liquidum, B.P., in a similar apparatus, thus obviating any possible influence which might have been exerted by the mercury of the former experiment. Portions of the same solution were also placed in various-coloured bottles, closed with rubber stoppers, and securely tied down. All were kept out of doors in unobscured sunlight, side by side, and examined as detailed below:—

Time of Exposure	Colour of Bottles, &c.	C.c. $\frac{n}{10}$ NaOH Required by 10 c.c.	C.c. NO from 5 c.c. at 15·5° and 760 mm.	Per Cent. Loss of Nitrite
—	Original solution	0·4 c.c.	37 c.c.	—
7 days	White glass (over paraffin)	—	0 „	100
Ditto	White flint glass	—	0 „	100
Ditto	In ditto + 10 per cent. glycerol	—	0 „	100
Ditto	Pale green ...	—	2·4 „	93·5
Ditto	Deep green ...	—	6·6 „	82·2
Ditto	Deep blue ...	—	7·3 „	80·3
Ditto	Amber	—	36·8 „	0·5
21 days	Deep blue ...	—	0 „	100
Ditto	Amber	—	35·0 „	5·4
7 weeks	Amber	—	35·0 „	5·4
4½ months	Amber	0·5 c.c.	32·6 „	11·9

Partial analysis of the gas collected from the solution exposed over paraffin showed—

	Per Cent.	
Absorbed by water ...	4·2	(probably alcohol-vapour)
Absorbed by KOH ...	1·0	
Absorbed by alkaline pyro	2·6	
Absorbed by acid Cu_2Cl_2	0·0	
Absorbed by $FeSO_4$ ...	0·0	
Residue	92·2	
	100·0	

The residue had the character of nitrogen, but was not examined for hydrogen or methane.

In the solutions exposed in white glass neither nitrite nor nitrate could be detected. Thus it is shown that—

From the very powerful action of strong daylight—

1. Glycerol 10 per cent. does not protect.
2. Green or blue glass exerts only a slight protective influence.
3. Amber glass is very fully protective indeed. This has since been confirmed by further experiments.

Effect of Oxygen.

When dealing with the solutions under consideration, one soon realises that the greater the air-space in a bottle the more rapidly the solution deteriorates, and it is very natural to assume that this loss is due to oxidation. This assumption is, however, only partially correct, the loss being partly due to volatilisation of ethyl nitrite into the enclosed air-space. By shaking small quantities of ethyl-nitrite solutions in dry bottles of various sizes, provided with rubber stoppers, very considerable loss is effected.

	After Twenty-four Hours		Three Days		Nine Days		Fourteen Days	
	Nitrogen	Oxygen	Nitrogen	Oxygen	Nitrogen	Oxygen	Nitrogen	Oxygen
Alkaline—								
10 c.c. = c.c. $\frac{n}{10}$ alcoholic KOH ...	0	0	0	0	—	0	—	—
Per cent. loss nitrite	9·1	10·3	10·6	11·7	—	12·1	—	—
Acid—								
10 c.c. = c.c. $\frac{n}{10}$ alcoholic KOH ...	—	—	—	—	2·2	6·0	2·4	7·1
Per cent. loss nitrite	—	—	—	—	13·4	30·2	14·1	33·7

Thus, using a solution of which 5 c.c. = 22 c.c. NO at 15·5° and 760 mm.:—

1 bottle, $\frac{1}{6}$ full, shaken 3 times in 8 minutes, showed loss = 9%

using solutions of nearly full B.P. strength:—

2 bottle, $\frac{1}{160}$ full, shaken 5 times in 5 minutes, showed loss = 80%
3 „ $\frac{1}{80}$ „ 3 „ 10 „ „ =62%
4 „ $\frac{1}{80}$ „ 4 „ 5 „ „ =52%
5 „ $\frac{1}{80}$ „ 4 „ 5 „ „ =32%

—the loss in each case being calculated on the ethyl nitrite.

In experiment (5) the bottle was previously filled with CO_2 in place of air, so that in experiment (4) 32 per cent, at any rate, was due to simple volatilisation, and not to oxidation.

Experiments were then made in which measured quantities of dry CO_2, dry nitrogen, and dry air were conducted separately through solution of ethyl nitrite in 90-per-cent. alcohol, thence through well-cooled vertical condensers, and finally through three separate small quantities of alcohol. The alcoholic solutions were united and the total loss calculated. In all cases there was considerable loss by volatilisation, and the difference observed when air was passed was trivial. A series of nine U-tubes was then substituted, 20 c.c. of strong ethyl-nitrite solution being placed in the first, and small quantities of alcohol in each of the remainder. One litre of dry nitrogen was then slowly passed, occupying half an hour A similar experiment was made, using dry oxygen alone. The contents of the nine tubes were quickly transferred to a cylinder, the tubes rinsed through with a little alcohol to make up a definite volume, and the solution examined. In both cases the last tube contained traces of nitrite, showing possible slight loss by volatilisation, in addition to the loss caused by saturation of the air-space within the tubes:—

1 litre dry nitrogen caused loss of 6·6 per cent.
1 litre dry oxygen caused loss of 11·1 per cent.

This difference is not very great considering the experimental error liable to be introduced in such an operation. It, however, establishes the fact that rapid oxidation does not occur by atmospheric contact during a short space. The litre of oxygen was theoretically sufficient to oxidise about three times the total quantity of ethyl nitrite present. To ascertain if prolonged contact with oxygen were more detrimental, two similar 20-oz. bottles were taken, and one

of them filled with oxygen, the other remaining full of air. Into each was quickly poured 5 fl. oz. of ethyl-nitrite solution, the rubber stoppers were replaced, and the bottles kept in the dark, with occasional shaking :—

—	Original	After One Week		After Four Weeks	
		In Air	In Oxygen	In Air	In Oxygen
Sp. gr. ...	0·83749	—	—	0·83826	0·83895
Increase in acidity = c.c. $\frac{n}{10}$ NaOH ...	—	—	—	5 c.c.	8·6 c.c.
Per cent. loss of nitrite ...	—	17	26·4	28·2	42·1

Later experiments have been made using 20-oz. bottles, filled with oxygen and with nitrogen respectively, and rendering the ethyl-nitrite solution in one set faintly alkaline, in another slightly acid, with results as shown in the table on page 834. Thus it appears that, in presence of a trace of acid, a slow process of oxidation is carried on, leading to loss of nitrite, increased sp. gr., and increased acidity, the last being roughly proportional to the loss of nitrite. The increase of sp. gr. has been formerly noted by MacEwan in 1884, and also by Pittuck and Merson (*C. & D.*, February 17, 1900, page 283).

Action of Water.

In 1888 Dunstan and Dymond remarked that pure ethyl nitrite is very unstable in the presence of water, decomposition being greatly accelerated by a trace of free acid.

From a number of experiments I have found that the addition of water quickly causes decomposition of the nitrite with greatly increased acidity. The reaction is one of hydrolysis :—

$$C_2H_5{\cdot}NO_2 + H{\cdot}OH = C_2H_5{\cdot}OH + HNO_2.$$

The nitrous acid, however, quickly decomposes, and escapes as oxides of nitrogen ($NO + NO_2$) in greater or less quantity according to the conditions of the experiment. An attempt was made to render this reaction quantitative, and thus ascertain the nitrite-content, by simple titration, using phenolphthalein, and making due allowance for the apparent original acidity, but in most cases the results were markedly lower than those calculated from the yield of NO. This was probably due in part to incomplete reaction, and in part to loss of nitrogen oxides, or of ethyl nitrite, and it was not found possible by simply running the solution into water and titrating to obtain concordant results. If it be sought to retain the nitrous acid as it is formed, by placing excess of $\frac{n}{10}$ NaOH + the necessary volume of water in a flask and running in the nitrite solution, it is found that very little hydrolysis has occurred : it is prevented or greatly retarded by the presence of the alkali. Many modifications and altered conditions were tried, among which the following may be of interest :—

1. To 20 oz. H_2O was added phenolphthalein, and $\frac{n}{10}$ NaOH just sufficient to tint ; then 5 c.c. ethyl-nitrite solution was added, the pipette reaching to the bottom of the flask ; after two minutes the titration was completed. Result, about 12 per cent. below nitrometer. Standing for a longer time was of no advantage.

2. Ten ounces of water + 10 c.c. hydrogen-peroxide solution were heated to boiling and neutralised; 5 c.c. ethyl-nitrite solution was run in as before, and the titration completed. Result, about 12 per cent below nitrometer.

3. Ten ounces of water + 10 c.c. hydrogen-peroxide solution were neutralised cold ; 20 c.c. $\frac{n}{10}$ NaOH was added, and then 5 c.c. nitrite solution. After heating to about 50° C. the solution was titrated with $\frac{n}{10}$ acid. Result was within 6 per cent. of the nitrometer.

The nitrometer method, of course, includes any traces of HNO_2 which may exist in the alcoholic solution.

These results are of theoretical interest, but as we have in Allen's method so ready and excellent a means of determining nitrites, it is scarcely worth while to spend time devising others, unless they be very simple. It is important to note that if only a small proportion of water be added to a strong alcoholic solution of ethyl nitrite, there is a very considerable amount of gas evolved (compare J. Williams, *P.B. Ph.* 1886, 515). *E.g.*, using a solution of which $2\frac{1}{2}$ c.c. = 34 c.c. NO, $2\frac{1}{2}$ c.c. was run into nitrometer over brine, and $2\frac{1}{2}$ c.c. water was added. On shaking, the mixture evolved about 12 c.c. of gas, which did not emit red fumes on contact with air, and which was largely dissolved by water. If, after the formation of this gas in the nitrometer, pot. iodid. and H_2SO_4 dil. are added as usual, nearly the full quantity of NO is obtained, absorbable by $FeSO_4$.

On taking 100 c.c. of this gas and shaking it with water the greater part dissolved, forming an acid solution, requiring 36 c.c. $\frac{n}{10}$ NaOH for neutralisation. The residual gas contained NO.

It may here be noted that glyceryl nitrite is also decomposed by water, with evolution of nitrogen oxides.

Summary and Conclusion.

We are now able to distinguish three different causes of loss in strength of alcoholic solutions of ethyl nitrite.

1st. Simple volatilisation, chiefly into the air-space of a partially filled bottle. The partially filled bottle determines far more loss than the occasional removal from a full bottle of the cork or stopper for a few seconds. Heat, of course, accentuates it.

2nd. The decomposition, with breaking down of the molecule, caused by daylight. This action is very intense, but can be almost entirely prevented by using bottles of amber-coloured glass—blue or green is useless.

3rd. The decomposition which ensues in the presence of oxygen (light being excluded), and which appears to be connected with hydrolysis. A feasible explanation of this is furnished by the following considerations :—

Nitrous acid and strong alcohol readily unite to form ethyl nitrite. A solution of this in 80-per-cent. alcohol, *plus* a minute trace of mineral acid to start the reaction, slowly undergoes hydrolysis and develops acidity. A solution in absolute alcohol similarly treated does not. It is therefore probable that in 90-per-cent. alcohol a minute quantity of nitrous acid is first formed sufficient to establish a state of equilibrium in the absence of oxygen, but which in its presence slowly oxidises to nitric acid, and so affords opportunity for the further formation of nitrous acid.

In support of this view may be mentioned :—

1. That it accounts for the slow process of oxidation which takes place. If ethyl nitrite were oxidised directly, one would expect a more rapid action.

2. That contact with oxygen, or air, of an already acid solution entails increased acidity, together with disappearance of nitrite.

3. That Atkinson found nitric acid (either free or combined) to the extent of 1·5 per cent. in old samples of spt. æth. nit. (*Year-book of Pharmacy*, 1887, page 531).

4. That solutions containing but little water are more stable and develop less acidity than others.

It is worth while to emphasise the influence of a trace of mineral acid in promoting hydrolysis, which does not seem to occur, or only very slowly, in a neutral 80-per-cent. alcohol solution. It might, therefore, be found possible to preserve pure ethyl nitrite in 90-per-cent. alcohol solution provided both substances were perfectly neutral.

The action of glycerol, which has been recommended as preventing loss and retarding acidity, is also worth fuller investigation.

Lastly, it is of high importance that samples collected under the Food and Drugs Acts should be properly taken. I have seen, for instance, bottles only one-fourth full, and sometimes only one-eighth full, left by an inspector as the vendor's sample.

All inspectors' bottles intended to receive spt. æth. nit. should be—

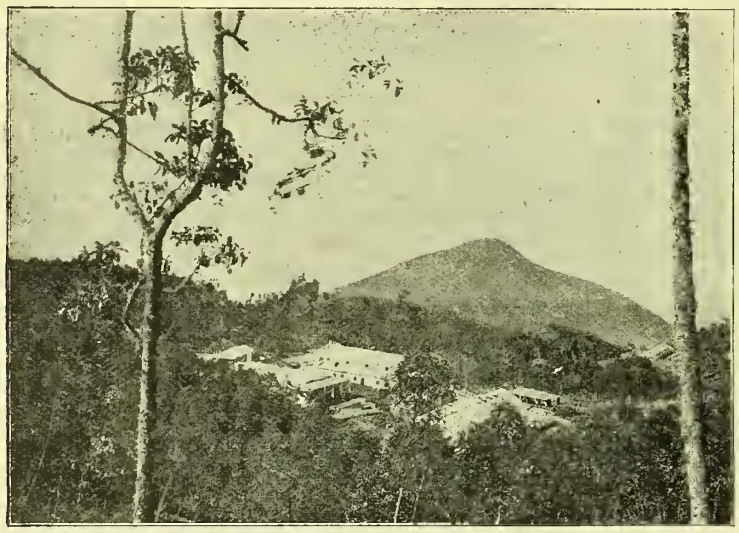
1. Dry.
2. Of suitable size, so that they are completely filled.
3. Of amber glass, or else wrapped in brown paper and sealed.
4. Securely closed. If corks are used they should be of irreproachable quality.
5. No sample should be put in a warm place.

This investigation was carried out in the analytical department of Messrs. Boot's laboratories.

A Visit to the Cinchona-plantations in Madras.

By F. L. Seely, St. Louis, Mo.

TWO months ago in company with my wife I arrived at the little town of Conoor, the upper terminus of the cog-wheel railroad which takes you from the hot plains to the mountain-top in Southern India. From Conoor we took a "jonga" (which is the name of a two-wheeled carriage used in India), for a distance of ten miles, to Ootacamund. Here we stopped at a very comfortable hotel, where we found that in lieu of the suffocating heat we had left in the morning we needed top-coats and grate fires. We remained for some days at this place, which is the home of Mr. William M. Standen, the Director of the Government cinchona-plantations in the Madras Presidency, he occupying a delightful little nook which is appropriately called "Cinchona Villa." Mr. Standen and his family, however, were out at the quinine-factory, which is in the midst of the cinchona-plantations at Nedivattam, twenty-three miles distant from Ootacamund, where he spends a large part of his time managing the laboratory and cultivation. As I wanted to see the plantations I set about to find transportation, and finally made arrangements with a teamster to take me out and back. It was necessary for him to station fresh teams along the road, and the day before the journey teams left Ootacamund and were in waiting for me at proper intervals, so that, except the stops to change horses, I made the twenty-three miles each way without allowing the animals to reduce the speed to a walking pace. Having started before it was light I reached the bungalow in good season, and, after a very pleasant reception by Mr. Standen and his good companion, we started off through the cinchonas for the laboratory.



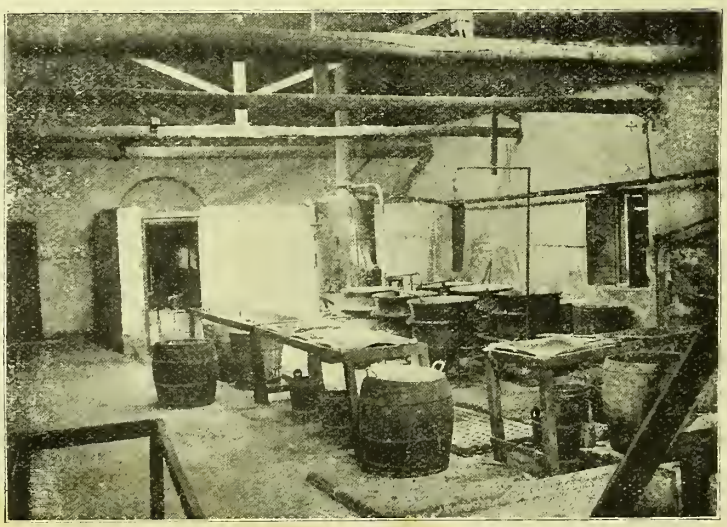
A Bird's-eye View of the Offices and Laboratory of the Madras Government Cinchona Plantations at Nedivattam.

The two tree-trunks are Cinchonas.

I was greatly surprised to find such a well-established factory, and still more surprised to find that quinine sulphate, as being produced, when placed side by side with the European makes could not be distinguished. The factory was undergoing extensive changes at the time, and very shortly will be a most modern type of quinine-laboratory; indeed, the most modern methods of manufacture are used, the quinine being taken from the bark with oil, and obtained as a pure white product with great economy. All machinery is operated by a water-wheel, the power for which, of course, costs nothing.

Mr. Standen is making about 10,000 lbs. of quinine a year, which is largely sold through the post-offices in 5-gr. powders. This feature of the British-Indian quinine-industry is most creditable and pleasing, for it places quinine, which is almost as essential as bread to the natives, entirely within their reach at about actual cost.

The quinine, after completion at the laboratory located at Nedivattam, is brought into the offices of the director at Ootacamund, where it is accurately weighed into 5-gr. lots, and each placed in a little envelope, on which is printed all necessary information for the native. The envelopes are printed in many tongues and dialects, each section of the country receiving its quinine in packages printed in its own familiar tongue. The little envelopes are tied up in bundles of 100 each, and sent to all post-offices. The price charged is barely sufficient to cover



Interior of the Laboratory at Nedivattam.

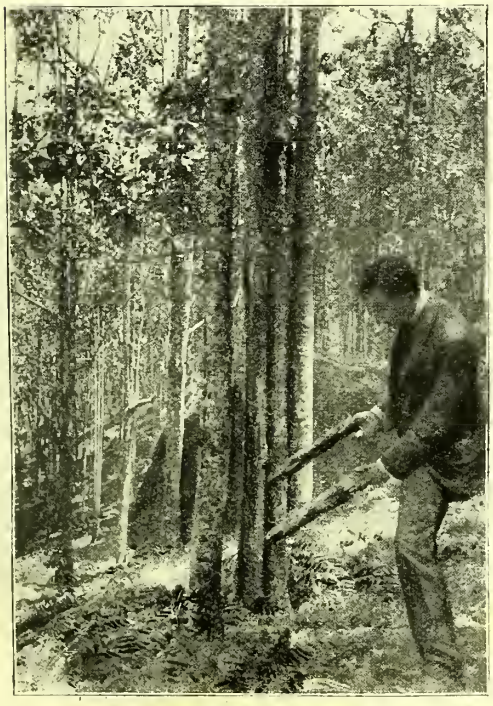
Many thousand ounces of quinine sulphate and cinchona febrifuge have been produced in this laboratory, which is now giving place to a fully equipped and larger factory.

Cinchona Magnifolia

This fine tree illustrates the peculiar twisting of the trunk which follows stripping the bark in alternate pieces, so that parts of the wood grow more rapidly than the rest. Mr. Standen, the Director of the Gardens, is shown in the picture.

The Oldest Crown Cinchonas in India.

This plantation is dense and entirely natural. Mr. Seely refers to it in the course of his notes.



A Coppiced Plantation.

Sir George King suggested that after barking the trees they should be coppiced, and the effects of this are seen here, the slender shoots being shown in the background. If the bark is carelessly removed, the wood is injured and rots. Here Mr. Seely is shown pulling out rotten wood from the trunk.

A Solitary Cinchona Succirubra.

This is in Ceylon. On the spot where Mr. Seely stands the eye could a few years ago look over millions of cinchona-trees. The tree figured and another are all that he could find to photograph in the course of his visit to the island.

actual cost of production. Persons not familiar with the country and people can hardly appreciate what a blessing this act is on the part of the Government.

There is usually a surplus above the requirements for post-offices and hospitals, and this surplus is sold, if anyone wishes to buy it, though the price charged is sometimes higher than market-price, by reason of the fact that a price

A Group of Workers on the Madras Cinchona Plantations.

is decided upon by the Government at the beginning of the year, which price shall rule through the year—and the fluctuations so common to quinine frequently go below the Indian price.

As to the plantations, they are very large and contain some very old trees, as well as a variety of species. The Government plantations have by far the best cinchona, but they are reserving most of their trees and letting them grow while bark can be purchased so easily from the planters. This is a help to planters too, as they receive the same price as they would in London, and have not the expense of sending it there, while the Government trees are being held for a "rainy day."

The finest trees are those at Dodabetta plantation. These trees have been shorn of their bark twelve times, and now have a good coat on again, but the practice of barking live trees has been stopped, and the trees are cut down, as is done in Java.

In addition to cinchona-cultivation and quinine-making I was much surprised to see fine beds of jalap and digitalis growing. Digitalis in full bloom is a beautiful thing, and made such a striking picture that I photographed it. This photo is of the Dodabetta plantation, where they are producing sufficient of these drugs to supply the medical stores of India.

This enterprise being entirely a private one, belonging to the British Indian Government, makes it impossible to say anything from a commercial standpoint; but I hope to return to the subject in connection with Java later.

We may recall the fact that Mr. Seely is secretary of the Paris Medicine Company, St. Louis, Mo., and the object of his tour was, in part at least, to inquire into the future of the supply of quinine, which is largely consumed by his company. As an appendix to his notes we quote the following in regard to the introduction of cinchona into India from Sir Clements Markham's book on Peruvian bark:—

The survey of the climates of India led me to the selection of the Nilgiri Hills for the establishment of our first plantations; and most fortunately the ablest arboriculturist in India, Mr. McIvor, had actually been in charge of Government gardens since 1848 on this very site. To his care I gladly, and with perfect confidence, handed over the difficult and critical task of converting the Peruvian-bark trees from wild into cultivated plants.

We landed at the port of Calicut, on our way to the Nilgiri Hills, on October 7, 1860. . . . Late in the evening we embarked in a canoe on the Beypur river. We were met by Mr. McIvor at the landing-place of Eddiwana, and started at once for the village of Wundur, whence the road leads up the Sisapara ghat to the Nilgiris. . . . The distance from Sisapara to Ootacamud, the chief English station on the Nilgiris, is thirty-three miles, fifteen of which are over the Kundah hills, and the rest of the distance is within the Nilgiris proper. As we rode round the artificial lake, and passed several pretty little houses surrounded by shrubberies, it was difficult to persuade ourselves that we were not in England. The garden in front of our hotel was stocked with mignonette, wallflowers, and fuchsias, but the immense bushes of heliotrope, covered with flowers, could not have attained such dimensions in an English climate. Ootacamud is nearly in the centre of the tableland of the Nilgiris, at the foot of the western face of the peak of Dodabetta. . . . This charming spot, with the roadsides planted with tall trees and the hedges filled with all the familiar flowers introduced from Old England, while curling smoke ascends through the foliage, suggesting the idea of chimneys and warm firesides, is as unlike India as can be imagined. I felt sanguine that the species of cinchona requiring lofty sites would thrive on the heights of Dodabetta, while suitable positions for those species which can bear a warmer climate would be found on the forest slopes which overlook the plains. A closer inspection confirmed me in this opinion.

European Drugs Cultivated in Madras: A Bed of Digitalis at Dodabetta.

The English settler on the Nilgiris will find English fruits, flowers, vegetables and grasses, the introduction of which is mainly due to the exertions of Mr. William McIvor, the superintendent of the Government gardens at Ootacamud, and for many years also superintendent of cinchona-plantations in Southern India. He was in charge of the gardens at Ootacamud from 1848 until his death in 1876, uniting zeal, intelligence, and skill to the talent and experience of an excellent practical gardener.

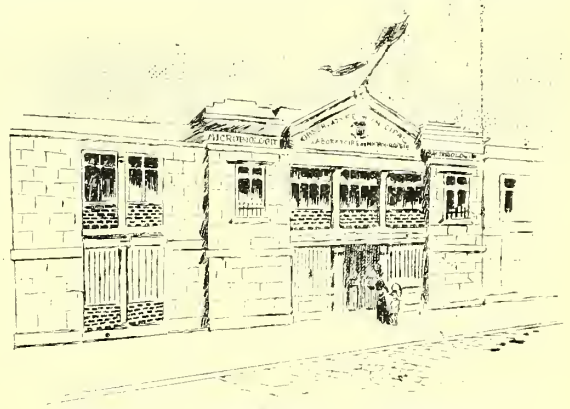
The Paris Municipal Bacteriological Laboratory.

(From our Paris Correspondent.)

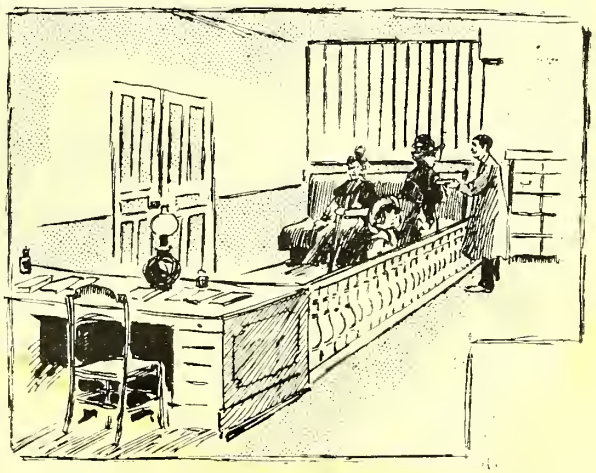
IN February, 1900, the growing importance of the Bacteriological Service of Paris compelled the removal of the establishment to more roomy premises. The origin of this Service was modest. Some twenty-five years ago, the air and water of Paris were periodically analysed at the Montsouris Observatory by a young and modest, though competent, *savant*, Dr. E. Miquel. With the growth of the sciences of micrography and bacteriology, his work increased in importance, and in 1895 the discoveries of Roux and Behring drew public attention to the antitoxic treatment of diphtheria. To facilitate the bacteriological examination of suspected diphtheria-infected matter it was decided to found a bacteriological laboratory, and after a long search for suitable premises, some rooms in the "Annexe Lobau" of the Hôtel de Ville were handed over to Dr. Miquel for the purpose. A sum of 400*l.* a year was voted for salaries and expenses, and minute precautions were taken to isolate the dangerous germs and all engaged in handling them. At the same time it was decided that tuberculosis and "all contagious diseases of which the germ is scientifically known" should be diagnosed at the same establishment. Much water, as they say in the French vernacular, has flowed under the bridges since 1895. The Bacteriological Laboratory has now a budget of 2,000*l.* a year, while the staff has increased from two to sixteen, and consists of a director, a sub-director, and fourteen micrographists, with two attendants. The new laboratory is situated in the "Marais" district, in the centre of a quarter still of great interest to the antiquary, for it has not much changed during the last century or two. It is also a particularly interesting corner of Paris to the pharmacist, for here in the streets around the rue Vieille-du-Temple, the rue des Francs-Bourgeois, is the home of Parisian wholesale pharmacy. A curiously distinct and original character is given to the quarter by the fact that this was, a hundred years or more ago, the residential quarter of the rich burgesses of Paris, and many of these wholesale firms occupy handsome city mansions, "built for pleasure and for state" by the well-to-do Parisians of the eighteenth century. Just opposite the laboratory is a fine old house with a sun-dial on its frontage, where the inscription "Produits Pharmaceutiques" and the name of a well-known proprietary medicine seem oddly out of place. Not far off is the "Pharmacy of the Good Shepherd," with its quaint painted sign, next door to the passage where a famous Duke was assassinated by Jean Sans-Peur; but one might fill pages regarding the history of this part of the French metropolis, equally attractive to the antiquary and the druggist.

Dr. F. Miquel.

The tricolor flag which adorns every French public building was conspicuous on the front of the house standing at the corner of the rue des Blancs-Manteaux and the rue Hospitalières-St.-Gervais, in which the laboratory is installed—the names in the Marais quarter are as quaint as the buildings. "Here is the laboratory," said my cicerone. "It looks like a market," I could not help remarking. "Quite so," he replied; "in fact, you see, the rear portion of the building, carefully walled off and quite separate of course, still forms the Marché des Blancs-Manteaux." Thus chatting, we passed through the entrance-door, and, entering a neat oak-furnished office, inquired for Dr. Miquel. After a few minutes' wait we were shown to the director's private office on the first floor, where the courteous *savant*, a man of about 50, with the red ribbon of the "Legion of Honour" at his buttonhole, expressed his willingness to give us every facility for visiting the establishment and to supply any information which might interest *C. & D.* readers. Like many hardworking *savants*, Dr. Miquel is of a somewhat



Entrance to the Municipal Laboratory.



The Waiting-Room.

Laboratory for Water-analysis.

retiring disposition, but his keen interest in his life's work rendered him communicative on this subject. After briefly sketching the history of the institution, he dwelt specially on the "Laboratory of Diagnosis" (to give its title literally), which is certainly a most interesting feature. The object of this Service is to execute bacteriological examinations, free of charge, for medical men, particularly in cases of diphtheria and tuberculosis. "Not for private individuals?" I asked. "No. We deal with doctors only, and take every precaution to preserve the professional secret so far as tuberculosis is concerned. The doctor hands us the patient's expectoration—he does not even give us the name of the patient. Our duty is simply to tell him whether the sputum contains the tuberculosis bacillus or not. You will readily understand, that in cases where the bacillus exists, a doctor uses his own discretion as to informing his patient of the fact. He may not wish to frighten him, but he will, of course, do his best to combat the disease when he knows it exists."

"And diphtheria?"

"Ah, that is another matter! It is one of those diseases which have to be publicly declared. Here, you see, is our entry-book for diphtheria-diagnosis; in this case (unlike the tuberculosis-form) there is a space for the patient's name and address."

"And how do you communicate the results of your analyses?"

"According to the doctor's instructions and his payments. Here at the top of the page you have a detachable slip or 'talon' with perforated edges. This one, you see, is marked '50 centimes paid.' That means we shall telegraph our report to the doctor. This second one, marked 15c. (the price of a postage-stamp), indicates that the answer will be sent by post."

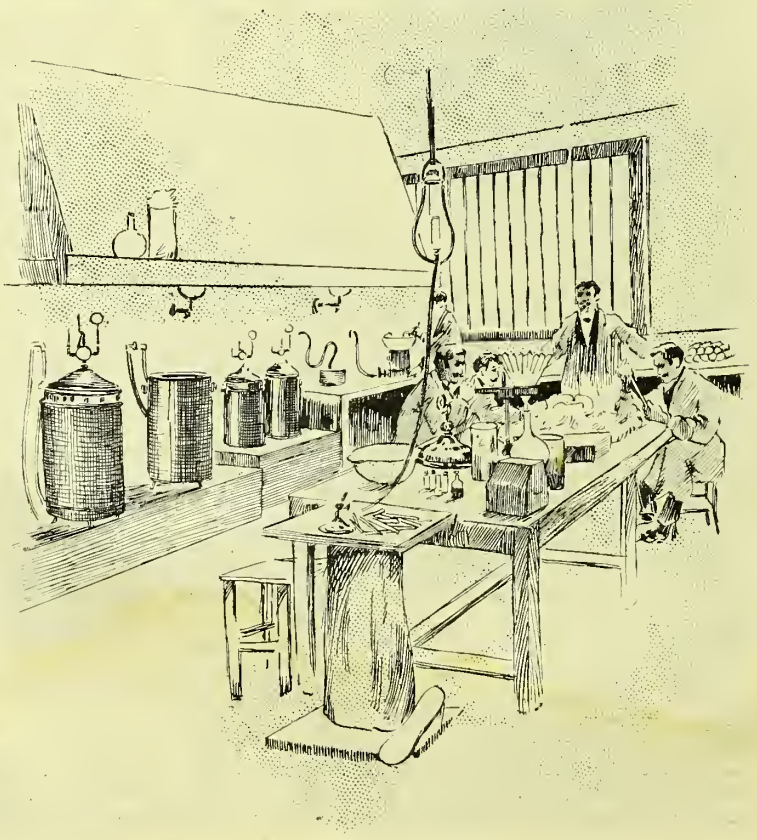
"And this blank slip?"

"Means that nothing has been paid. In such cases the answer must be called for."

"You report promptly?"

"As promptly as possible. Time is often of importance in these matters. We now execute some 5,000 diagnoses per annum of one kind and another. Here, in these frames on the walls, are diagrams representing our yearly and monthly work from 1895 to 1899. You will notice how curiously the 'diphtheria' column drops between 1895 and 1896; this is when the Roux-Behring discovery was made. The tuberculosis column, on the other hand, increases steadily year by year. Here is one of our boxes in nickelled brass. A comparatively expensive article, you will say; but remember that it can be sterilised and used an indefinite number of times."

He handed me a hinged metal box about 10 inches by 3 inches by 1 inch, divided into four compartments. One contained a sterilised tube labelled "False membranes," two sterilised tampons of cotton-wool (one for nasal mucus and one for pharyngeal mucus), a couple of tubes of sterilised and gelatinised serum, and a spatula in silvered brass. Three printed forms were enclosed, two explaining the exact method of using the objects, and a third with blanks for name and address and one or two necessary questions.



Laboratory where the Culture-media are Prepared.

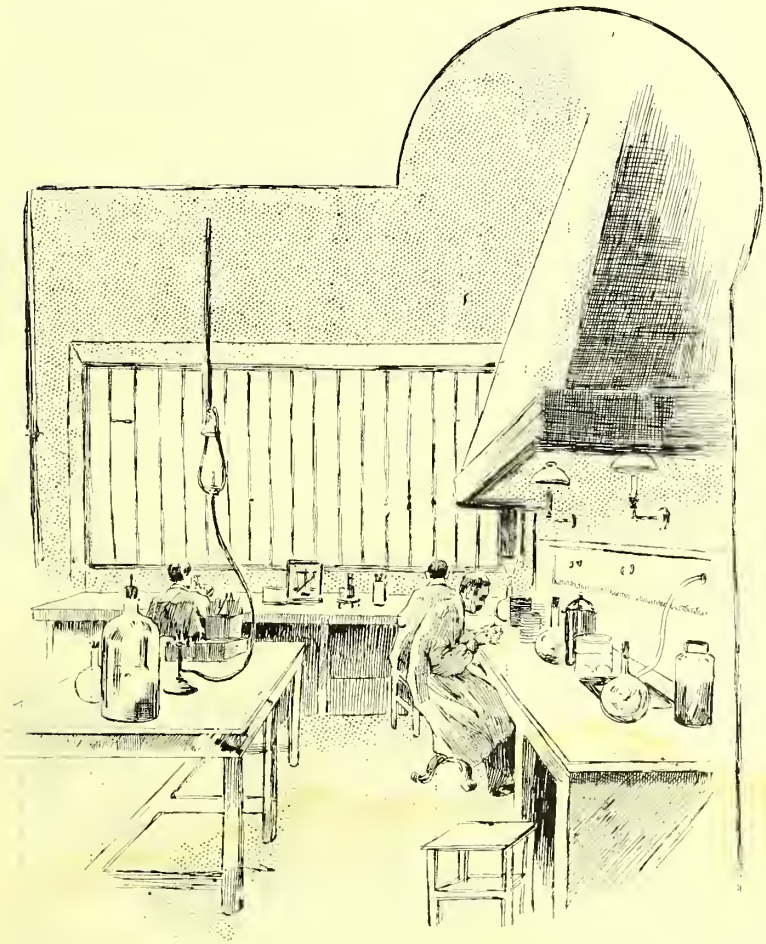
These articles, the box, the printed slips, the tubes, &c., are all marked with the same number (*numéro d'ordre*) to avoid any possibility of confusion. A ticket on the box requests its return to the laboratory, if not utilised within a week. The serum is obtained from the horse-slaughtering *abattoir* at Villejuif. Some 10,000 tubes are prepared yearly. The supply is practically unlimited, as from forty to eighty horses are daily killed at this establishment.

"So you always receive your 'false membranes' in these tubes and boxes, Dr. Miquel?" I inquired.

"I wish we did; but such is not the case. A husband brings his wife's expectoration in a dirty handkerchief carried in his pocket. Others are sent in glasses, saucers, or bowls, not always even covered with a piece of paper. And they have often been carried half across Paris in this fashion!" added the worthy doctor, with a touch of comic despair in his tone.

Laboratory for Microscopical Examinations.

After giving some further details on this and kindred matters, Dr. Miquel offered to show me over the establishment. The entrance-hall is flanked on the left by a public waiting-room, with a small office where the necessary printed forms can be filled in. Alongside this are the laboratories where the diagnosis already alluded to is carried out. Behind these two apartments is the wash-room, where everything is first passed through an autoclave before being washed. On the same floor are two large hot-rooms (*étuves*), one heated to 20° C. and the other to a still higher temperature. These are the culture-chambers, containing some hundreds of flasks of cultures, which Dr. Miquel examined and described, with paternal interest in the "colonies." Animals for experimental purposes (guinea-pigs and rabbits) are housed at the back of the building, and are inoculated in a room close by. A glassware store, a work-shop, and a room for preparing culture-media are also situated on this floor, as well as a room for the examination of school-children who have been attacked by diphtheria. No Parisian child who has suffered from this disease can re-enter the communal (Board) school without a certificate from Dr. Miquel certifying that no dangerous germs lurk in the system.



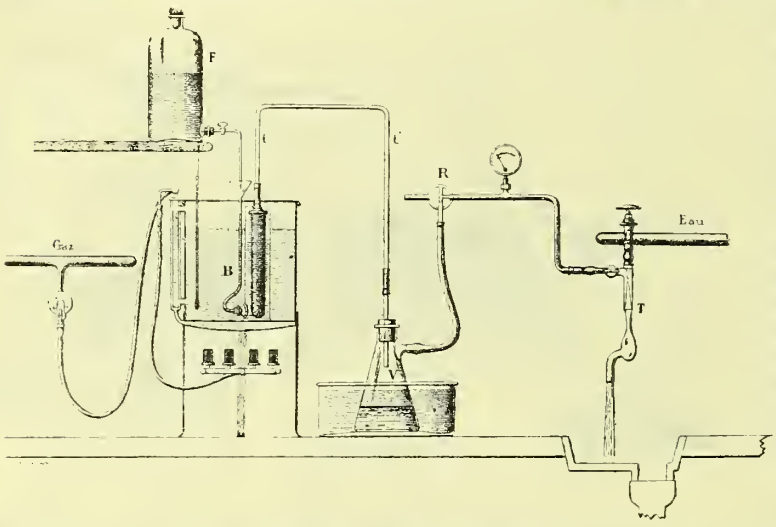
Diagnosing Contagious Diseases.

"The child has to be actually brought here? It does not suffice to bring its expectorations?" I asked.

"No; we insist on seeing the child itself. I daresay you have heard of conscripts anxious to avoid military service who have carefully brought (to the army surgeon in charge of the medical examination at the recruiting-depôt) some expectorations which gave conclusive proof they were victims to tuberculosis, the sputa having been taken from some consumptive but obliging friend? The army doctors are up to the trick now. In the same way the actual presence of

the child convinces me that it is really its expectorations, and not those of a healthy school-mate, that I am reporting upon."

On the first floor is a library, well stocked with the latest Pasteurian literature, on each side of which is an office and private laboratory; one of these is occupied by Dr. Miquel, the other by his lieutenant (*sous-chef*). The photomicrographic room has a dark-room adjoining, and the spectroscope-chamber is hard by; but the two most interesting laboratories on this floor are those devoted to the analyses of water and air, each having an adjoining room where microscopes and apparatus are kept. The honour of inaugurating periodical and systematic analyses of city air belongs, I believe, to the Paris Municipal Laboratory of Bacteriology, or, as it was then called, the Observatory of Montsouris.



Apparatus for Sterilising Serum.

F, Bottle containing serum to be sterilised. B, Water-bath at 40° C. *t t'*, tube leading from the filter-candle. V, Receiver for the sterilised serum. R, Three-way tap. T, Water-pump.

"This cylinder," explained Dr. Miquel, "contains 150 litres of air, and this air is continuously taken in all day long. An average analysis is thus made of the air of the whole twenty-four hours"; and he explained various details of filtration by which dust and air are excluded.

"Then you only sample the air of this part of Paris?"

"Periodically or occasionally we sample the air from other parts, but in this spot we have the convenience, which does not exist elsewhere, for thorough and continuous examination."

The actual analysis is carried out by passing the air into a glass flask of 250 c.c. capacity containing sterilised water.

The periodical analysis of public drinking-water supply is nowadays considered a necessity by most civilised communities. In Paris the water of the municipal reservoirs is analysed daily, a weekly report being published in the official municipal bulletin. The general appearance, hydrometric degree, total weights of lime, earthy carbonates, oxidised organic matter of nitrous and nitric nitrogen, of dissolved oxygen, &c., are given, as well as the number of bacteria per c.c.

"I see, Dr. Miquel," I remarked, "that this weekly statistical table gives details of the analysis of the water of various wells and springs as well as of the public reservoirs. Do you report on these regularly also?"

"The wells," explained the doctor, "we examine and report on as far as possible. Situated on private property as a rule, we are unfortunately in many cases unable to legally insist on the right of inspection. Certain abuses, however, can be checked. Many such wells exist in wine-taverns (*marchands de vin*), and we do our best to protect the public in these cases."

"The private individual has a right to drink bad water himself, but not to sell it to the public, you mean?"

"Exactly. We try and take the wells in rotation, and get round the whole every year or so. You must understand this little weekly report of twenty or thirty lines does not represent the extent of our weekly work, but merely the

Observatoire Municipal de Montsouris.

Analyses chimiques et micrographiques des eaux—MM. Albert Lévy et P. Miquel. Semaine du 24 au 30 mars, 1901.

Sources et Rivières	Aspect	Degré hydrotimétrique	Chaux		Matière organique en oxygène*	Azote		Oxygène dissous	Résidu sec à 180°	Bactéries par centimètre cube†		Moisissures torules ou coniles†
			Totale	Carbonate alcalino-terreux		Nitreux	Nitrique			Semaine sus indiquée	Moyenne annuelle	
			milligr.	milligr.	milligr.	milligr.	milligr	milligr.	milligr.			
Réservoir de Montsouris, Vanne, le 25	Clair	20·7	119	118	0·2	0·00	2·2	12·0	253	100	1·150	—
Réservoir de Montsouris, Vanne, le 28	Id.	20·7	—	—	0·3	0·00	2·3	10·9	—	435	1·150	—
Réservoir de Montsouris, Vanne, le 30	Id.	20·7	—	—	0·3	0·00	2·2	11·3	—	800	1·150	—
Réservoir de Montsouris, Loing ‡	—	—	—	—	—	—	—	—	—	—	—	—
Réservoir de Ménilmontant, le 25	Clair	24·4	117	125	0·6	0·00	2·1	11·7	284	650	3·245	—
Réservoir de Ménilmontant, le 28	Id.	24·4	—	—	0·5	0·00	2·1	11·1	—	435	3·245	—
Réservoir de Ménilmontant, le 30	l. louche	24·6	—	—	0·6	0·00	2·2	11·6	—	1,000	3·245	—
Réservoir de la rue de Villejust, le 25	Clair	14·2	74	65	1·0	0·00	2·2	12·0	196	2·400	1·530	300
Réservoir de la rue de Villejust, le 28	Id.	14·2	—	—	1·3	0·00	2·1	11·6	—	2·700	1·530	—
Réservoir de la rue de Villejust, le 30	Id.	14·3	—	—	1·3	0·00	2·1	11·7	—	2·520	1·530	—
Rue Saint-Charles, 60 (école communale)	l. louche	14·0	71	64	1·3	0·00	2·2	11·8	193	4·900	1·880	—
Boulevard St.-Victor, route milit. (font. Wallace)	Id.	14·2	70	65	1·3	0·00	2·2	11·9	191	6·000	1·880	—
Seine, usine de Choisy-le-Roi	Louche	—	—	—	2·7	traces	—	12·2	—	165·000	49·685	9·500
Seine, usine de Neuilly	Id.	—	—	—	0·9	0·00	--	12·3	—	115·000	38·080	—
Marne, usine de Saint-Maur	Trouble	—	—	—	0·9	0·00	—	11·9	—	7·500	72·700	—

Observ.—* Représentée par le poids d'oxygène emprunté au permanganate de potasse. † Après une incubation de quinze jours. ‡ Il n'y a pas d'eau.

Extract from the Paris Water Report in the "Bulletin Municipal."

space which the *Bulletin Municipal* [see specimen on page 842] allows us, so we make a selection and only publish what is most interesting."

Many communes outside Paris avail themselves of the services of the Municipal Bacteriological Laboratory for examination of their drinking-water; in fact, this is the only source of outside income of the laboratory. Some 2,000f. is thus contributed yearly; the other 48,000f. is paid by the Paris Municipality, and consequently by the ratepayers. An English politician once likened the yearly budget of the British Navy to an annual premium paid for national insurance, and observed that no sensible and prudent man objected to pay insurance-premiums. In the same way the sums devoted to these municipal laboratories are (as will be evident from the foregoing remarks) the Parisians' premium for assurance against poisoning by air, water, or certain other infectious maladies. I need hardly add that the building is constructed on modern hygienic principles, and that asphalt floors, glazed and painted surfaces enable all to be washed down and thoroughly cleaned.

"Lavage à pleine eau" is the Pasteurian motto. "Dust is the great vehicle of locomotion for bacteria," Dr. Miquel insisted. "Do you know there are fewer microbes in the air of the Parisian sewers than in the air of the public street? Mind you, I say in the air—I am not speaking of the sewage itself. The reason is simple enough—the walls, &c., of the sewers are always damp, whereas in the street dust flies about."

It would require several pages of the *C. & D.* to reproduce the numerous chapters of the Gospel of Health which Dr. Miquel preached, during the couple of hours we spent with him. A dim recollection of an antiseptic human life, beginning with the infant's sterilised milk and finishing with a microbicide cemetery, was the general impression left on my mind by the conversation of this quiet enthusiast; and I may give my experience that all *savants* of the Pasteurian school have a wonderful and thorough enthusiasm under their quiet and silent exterior. Of Dr. Miquel's career I could learn little from his own lips, but it is self-evident that he has himself built up by the patient labour of a quarter of a century this useful and remarkable institution. The fact that he proposes shortly to publish some account of it in a scientific French journal is probably a proof of the interest excited by its novel character and the numerous demands for information.

When we had taken our leave, my companion remarked, "He won't talk about himself, but that red ribbon of the Legion of Honour was given him for services rendered. He speaks freely enough about the laboratory. We are told that we shall be known by our works."

"Minor" Matters.

WE have had so large a number of accounts of the April Minor examination sent to us that we are enabled to pick the best bits out of them. The writers were examined at Galen Place, London.

Hard Lines!

I was out on the first day. I did very good practical work in the morning, but in the afternoon I fairly lost my head. I had the same man as last time, and he worried from beginning to end—so much that I nearly once put down my things and ask to come out. I had 5 oz. syr. calcii lactophosph. to make, which was very easy if he had left me alone. I thought I would make it first, so that when I should come to add the sugar, which was to be dissolved without heat, I could be doing my other work. Well, I calculated one-twentieth B.P. quantities in avoirdupois weights and measures. When my calculations were ready, and I had measured out the lactic acid, &c., the examiner asked me to work on the metric system; so all that calculation and time were lost. I asked him for a suitable apparatus, and he gave me an ungraduated cylindrical measure, which I told him I could not use. He knew very well that the things were not in the room, but he sent me to look among mortars and evaporating-dishes. Consequently, when I had lost another ten minutes, and had to go back and tell him I could not find one, he rang the bell, and brought a 250-c.c. tube. I had to measure 3·75, which could not be done accurately in a 250-c.c.; but I was so frightened of the man that I risked it, with the consequence that he came down upon me like a thousand of bricks. After that I was doomed. Not a moment did he leave me; and I noticed two or three of the fellows grinning because I had taken his mind practically all the time off them. My pills turned out very well indeed, and so did the mixture, and my suppositories were in the mould; but I suppose they would not count. Well, it is over now! (139/74.)

From An Often-ploughed One.

Mr. Wilson gave me the following to dispense:—

Bismuthi salicyl.	℥ij.
Pulv. tragacanth.	ʒss.
Tr. card. co.	℥iv.
Aq. ad	℥vj.

One-sixth part to be taken three times a day.

Ung. hyd. ox. rub.	℥ij.

Sig.: M.d.u.

Ol. terebinth....	℥j.
Mucilaginis	q.s.
Aq. ad...	℥iss.

Ft. haust. Statim sumend.

Emp. hydrarg.	2¼ oz. (about)

and

Spread a plaster of the same 4 × 3.

I had two tries of the bismuth mixture before turning it out presentable.

In the afternoon I got face to face with the following:—

"Estimate the amount of silver in 1 litre of Solution No. 29 with the aid of the pure KCl supplied.

"Determine the composition of the mixture of two salts supplied in Box K2. Quantitative work to be done first."

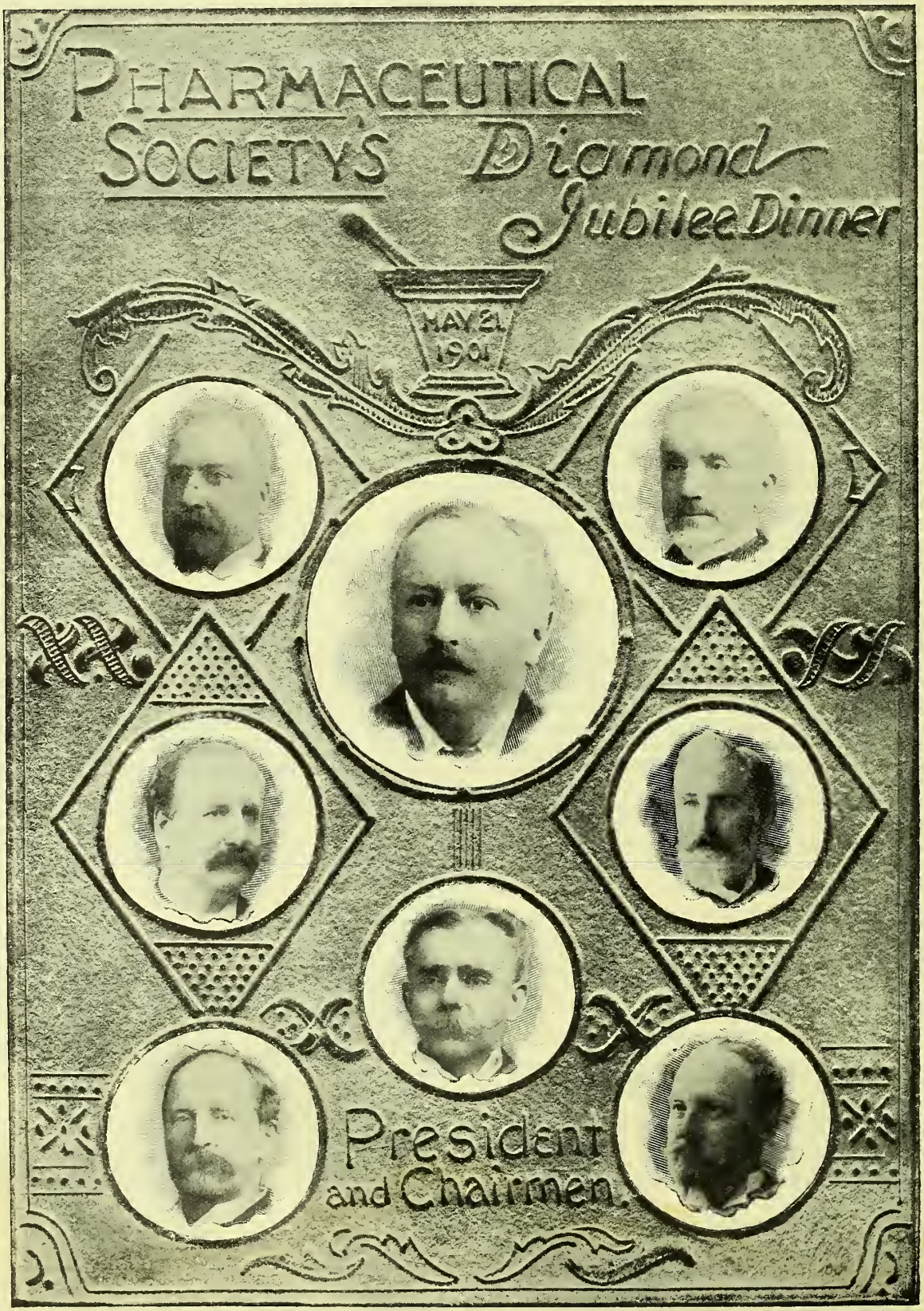
The solution worked out to 13·4 grammes of silver (Ag) in a litre, and the salt consisted of AmCl and $ZnSO_4$. One candidate reckoned his solution as $AgNO_3$, and passed.

On the second day my first subject was prescriptions. I had two in English to transcribe into Latin. In one of them occurred the words, "To be painted behind each ear." I had forgotten whether "pone" (behind) took accusative or ablative, and put "ear" at first in the accusative, as it should be, and afterwards struck it out and wrote the ablative over the top. My examiner never mentioned it! Then two ordinary prescriptions to render in full Latin and English. Finally about a dozen doses, and I was told to go and sit down.

My next subject was pharmacy. I was asked what a water-bath is, also an evaporating-basin, vacuum-pan; what temperature is it possible to attain by means of steam? Had I conducted a distillation? Difference between spt. ammon. arom. distilled and one made by simple solution; objects of distillation in making spt. ammon. arom.; what are elutriation, levigation, and lixiviation? The examiner showed me a list of seven B.P. preparations, and wanted to know the strengths. I can only remember five—ung. iodoform., ext. nuc. vom. liq., lotio nig., ung. bellad., and tr. scillæ. Although I have made it often enough, I had forgotten the percentage of calomel in black wash.

Next subject, chemistry. I had Professor Kipping. He said I had done very well first day, and hoped I would be all right in theory. I then had to tell him all I knew about chromium and chromates, nitrogen and its oxides, aldehydo, acetic acid, acetic ether, acetone, extraction of silver, principle of extraction of all the metals, and method of making Na_2CO_3 by the Solvay process. In materia medica I had to recognise aconite-leaves, Indian hemp, bebeeru-bark, chiretta, jalap (percentage of resin), belladonna-leaves, balsam of tolu, litmus, oil of cajuput (a question or two about tests for cineol and phellandrene), and guaiacum-resin.

My last subject—botany—was a very comfortable ten minutes. I was shown a monocot. petiole under the microscope, a narcissus, and asked its order and the difference between it and *Liliaceæ*. A few questions on lenticels, stomata, and underground stems, with a description of the germination of a seed, finished me off; and in a few minutes I was called upon to receive the congratulations of the President. A. M. (138/71.)



Mr. C. B. Allen (Vice-President).
Mr. I. Bourdas.
Mr. G. S. Taylor.

Mr. G. T. W. Newsholme
(President).
Mr. Charles Umney.

Mr. S. R. Atkins (Treasurer).
Mr. W. Martindale.
Mr. W. Warren.

The Annual Dinner of the Members of the Pharmaceutical Society and their Friends

The Diners.

Abel, Sir Frederick, Bt., F.R.S.
Allen, C. B.
Anderson, G.
Arrow, J. J.
Arrowsmith, A. R.
Atkins, S. R.
Attfield, Dr. J., F.R.S.
Baiss, Arnold
Baiss, Sydney
Beddard, J.
Bolton, H. N., sen.
Bolton, H. N., jun.
Bourdas, I., sen.
Bourdas, I., jun.
Boutall, G. S.
Bowen, J. W.
Boxall, F.
Boyes, A.
Braithwaite, J. O.
Branson, F. W.
Bremridge, R.
Bridge, G. E.
Brown, G. A.
Browne, Sir J. Crichton, F.R.S.
Buddles, W.
Carteighe, M.
Carter, J. C.
Castle, J. W.
Chalmers, W.
Chater, A. J.
Clarke, R. Feaver
Collie, Professor N., F.R.S.
Cooper, A.
Cooper, A. J. B.
Cope, A. Curtis, R.C.V.S.
Cottle, Dr. Wyndham
Cownley, A. J.
Cross, W. Gowen
Davies, T.
Davis, W. A.
Dixon, R. D.
Druce, G. C.
Edden, T. L.
Elkington, W.
Everett, J. G.
Ewell, R. M.
Farr, E. H.
Flux, W.
Fogerthy, —
Foster, E. D.
Francis, G. B.
Francis, W. H.
Frankish, Dr.
Froude, H.
Fuller, J., F.C.S.
Glazier, W. H.
Glyn-Jones, W. S.
Greenish, Professor
Gregory, N. C.
Gulliver, W. F.
Hall, H. E.
Halstead, —
Hanson, A. W.
Harrington, J.
Harvey, R. M.
Heddy, Dr.
Hickman, W.
Hill, E. W.
Hills, Dr. R.
Hills, Walter
Hodgkinson, —
Hodgkinson, C
Hodgson, C. R. (Secretary Col. Preceptors)
Holmes, C. J.
Holmes, E. M.
How, —
Howie, W. L.
Hugill, E. A.
Hugill, J. H.
Humphrey, John
Jackson, C.
Jones, Adpar
Jones, R. H.
Kemp, Harry
Kempston, T.
Kerr, Charles
Knight, G. F.
Lansdown, G. A.
Lapworth, Dr.
Leng, —
Lescher, F. H.
Lewis, D. L.
Lewis, S. J.
Linstead, E. L.
Lloyd, J.
Long, F. C.
McAlister, Dr. D. (Chairman Pharmacopœia Committee, G.M.C.)
MacEwan, Peter
McIlraith, Dr. C. H.
Martin, C.
Martin, N. H.
Martin, T.
Martindale, Dr. W. H.
Martindale, W.
Massey, S. J.
Mathews, J. H.
Miles, C. J.
Millard, E. J.
Moon, H.
Morison, P., jun.
Morris, E. W.
Morson, A.
Naylor, W. A. H.
Padman, J., M.R.C.S.
Pain, R.
Palmer, W., M.P.
Parsons, W.
Paterson, J.
Paul, B. H.
Peck, E. S.
Perry, W. A.
Philp, W. J. I.
Pierrpont, W. J.
Preston, Major A.C.
Raper, J. R.
Ridgwell, J. B.
Ridley, R.
Robbins, J.
Robertson, Dr. Milne
Robinson, R. A., L.C.C.
Robinson, W. P.
Roe, G.
Rogers, F. A.
Rogerson, W. J
Royle, H. W.
Royle, J.
Savory, A. L.
Schacht, Dr. F
Shannon, R. J.
Sherwood, N.
Shillcock, A.
Silverlock, H.
Simpson, Alderman
Smith, F. Woodman
Smith, J. H.
Society of Apothecaries, the Master (Dr. C. Brown)
Solomon, A. H.
Stevenson, Dr. T.
Stevenson, H. E.
Stokes, H.
Storrar, David
Street, A.
Street, E.
Taubman, R.
Taylor, G. S.
Thompson, H.
Thompson, S.
Thomson, Prof. J. M., F.R.S. (Inst. Chem.)
Thorpe, Professor T.E., F.R.S.
Thurston, J.
Tilden, Professor W. A., F.R.S.
Tomkins, W.
Tregaskis, —
Umney, C.
Umney, J. C.
Voelcker, Dr. (Soc Pub. An.)
Walker, H.
Walker, H. J. D.
Want, W. P.
Ward, J. S.
Warren, F. W.
Warren, W.
Weston, S. J.
Whiffen, Thos.
White, Edmund
White, G.
Wiggington, A.
Williams, T. R.
Wink, J. A.
Woolley, S. W.
Woosnam, W. W.
Wootton, A. C.
Wretts, J. R.
Wright, A.
Wright, H. C.

With two or three exceptions these were present

[The sketch on this page is a reproduction of part of the design on the front of the official programme and list of guests.]

The Dinner.

Vins.	Menu.
Dry Sherry.	Hors d'Oeuvre.
Liebfraumilch.	Consommé à l'Ecossaise.
Deutz & Geldermann's	Crème Portugaise.
Gold Lack, 1893.	Saumon, Sce. Mousseline.
Irroy, Carte d'Or.	Blanchailles.
Ex. Sec, 1893.	Ris de Veau, Bouquetière.
Liqueurs.	Poulet à la Vernay.
Château Larose,	Goblet des Chartreux.
1895.	Selle de Mouton de Galles.
Martinez, Mod.	Haricots Verts Maître d'Hôtel.
Dry Bottled Port.	Pommes de Terre Fondantes.
	Caille de Vigne sur Canapé
	Salade.
	Asperges, Sce. Maltaise.
	Pêches à la Souveraine.
	Fondu à l'Américaine.
	Melon en Surprise.
	Gâteau Mascotte.
	Dessert. Café Noir.

The company which assembled in the Hotel Metropole between 6.45 and 7 was received by Mr. C B. Allen (Vice-President) and Mr. S. R. Atkins (Treasurer), the President (Mr. G. T. W. Newsholme) still being invalided. When the Whitehall Room was reached about 7.15 it was seen that the cross table was supplemented by six spurs, at which Messrs. Atkins, Taylor, Bourdas, Bremridge, Martindale, Umney, and Warren were chairmen. Mr. C. B. Allen was supported in the principal chair by Sir Frederick Abel, Dr. McAlister, Mr. M. Carteighe, Professor J. M. Thomson, Mr. F. H. Lescher, and Mr. Harry Kemp. On the left were Dr. Charles Brown (Master Society of Apothecaries), Mr. W. Palmer, M.P., Sir J. Crichton Browne, Professor T. E. Thorpe, Mr. Walter Hills, and Mr. G. Claridge Druce. After dinner (in the course of which the Vice-President took wine with the guests) the Liedertafel Glee-singers sang Grace.

The Speeches.

The Toastmaster then called for silence whilst the Chairman proposed the toast of "His Majesty the King," which was enthusiastically drunk, the company afterwards singing the National Anthem.

Robinson quite Parliament'ry;
Palmer, full of seeming pain,
Made apology for "newness,"
Promised help for chemist's gain;
Pleasant talk with little meaning
Did not set our hearts afire,
But we said "Hear, hear!" and "Question"
Till the incident so dire
When the Tafel—Liedertafel
Broke out fiercely "Strike the Lyre."

Mr. R. A. Robinson, in proposing

"The Houses of Parliament,"

asked what should they do without the Houses of Parliament? (Laughter.) What should they read every morning in the newspaper? (Laughter.) He had heard many different opinions as to the House of Lords, and a noble lord, a friend of his, said it was a very dull place indeed. Another friend in the House of Commons said he might just as well send his stick there as go himself. (Hear, hear, and laughter.) Joking apart, they hoped for some amending legislation in the near future, and the Lord Chancellor himself had spoken of the urgent necessity for alteration in the pharmacy law of the country. (Applause.)

Mr. W. Palmer, M.P. for Salisbury, in responding, said he claimed to be more or less a representative of science in the House of Commons, as he is a Fellow of the Chemical Society. He had devoted several years of his life to the study of physical science and chemistry, and he took his degree in both those subjects. Naturally, therefore, such questions regarding legislation for chemists, alluded to by Mr. Robinson, would engage his attention, and he would endeavour to promote the interests of the Pharmaceutical Society in the House.

Then the clarion voice of Atkins
Sounding altruistic creed,
Spake of medicos with feeling
And their help in direst need.
Soaring high in flight impassioned,
Showing virtues they confer,
While of how B.P.s were fashioned
Spake the wise McAlister.
Yawning, yawning, ever yawning,
Steeped in *ennui* we were.

Mr. S. R. Atkins's toast was

"The Medical Profession."

He said he did not know any man better prepared to propose this toast than a pharmacist. The relation of the pharmacist with medicine was exceedingly close and confidential, and looking back upon some length of life he rejoiced to see the growing confidence and esteem which existed between medicine and pharmacy. This was largely attributable to the Society which he had the honour to represent—the Pharmaceutical Society of Great Britain—which this year attained its diamond jubilee. The Pharmaceutical Society, during the sixty years of its existence, commencing with that honoured and noble man William Allen, had had associated with it a number of distinguished and honourable members. He rejoiced to think there were many who had followed in their steps, included amongst them being Mr. Michael Carteighe. (Cheers.) They loved the autocrat who ruled over them for fourteen years. Such men taught a high standard of relationship between the two branches of medicine. And what was that standard? He believed the purity of medicine, the purity of the preparations used in medicine, and accuracy in dispensing had been a bond which all had laboured to inculcate. Further, they had endeavoured to draw the line of demarcation between prescribing and dispensing. He ventured to call this profession of medicine a very noble one, and the only truly altruistic one he knew of. They found in it a body of highly-cultured men, some of whom had sacrificed their lives in the interests of their profession, and had gone to early graves without any Victoria Cross or gold medal from the Humane Society. He wished to call attention to the immense advances made in medicine during the last fifty or sixty years. In surgery it was fifty-four years ago since Sir James Simpson used chloroform as an anæsthetic—an event which had opened up such a vast future. During the last fifty years great strides had also been made in medicine; the old-time physician asked for pulvis rhei, and pulvis jalapæ, and blue pills and black draughts. But where were those drugs now? In place of them they had tinctures of microbes, fluid extracts of bacteria, and serums—any quantity of them. He did not know whether they were "Wellcome"—(laughter)—that was another matter. The medical profession was a noble one: it assisted them into life, it delayed their departure as much as it could, and in the interval they were all deeply indebted to it for many benefits. He coupled the toast with the name of Dr. D. McAlister, the distinguished Chairman of the Pharmacopœia Committee of the General Medical Council.

Dr. McAlister said he naturally felt great responsibility in replying for the medical profession, considering that there were 38,500 odd members of it in the United Kingdom, each one of whom probably called for the services of three or four pharmacists He heartily concurred in the striking words which Mr. Atkins had used in regard to the profession and the Pharmaceutical Society, although he was a mere altruistic prescriber himself, and laid no claim to a knowledge of dispensing. His position as Chairman of the Pharmacopœia Committee had given him some insight into the relations that existed between pharmacists and the medical profession. For a good many years they had endeavoured to bring the Pharmacopœia, their sacred book, into a condition nearing perfection. It fell to his lot to complete the last edition by the publication of the Indian and Colonial Addendum at the close of last year. The Pharmacopœia had only been before the profession for a short time, and he was highly gratified to find that on the whole they had not been so unsuccessful as they had been in the past. If there were any success in the Pharmacopœia it was largely owing to the fact that they had been much more closely drawn into relationship with the Society than they

had been on any previous occasion. It was the late Dr. Leech who drew this relationship closer. The Pharmacopœia was not perfect. (Laughter.) He had been reminded of that from various quarters, but no labour would he spared to bring it nearer perfection. He himself went through every line and comma of it, and some of the proofs he read no less than eleven times. If he were to show them his private copy, which had never been seen by anyone, they would be surprised to see the enormous amount of queries he had made on the margins, and which still remained unsolved. He hoped that some of the young men engaged in pharmacy would work out some of these problems and add something to the sum total of their knowledge, so that the result of their researches could be embodied in the next Pharmacopœia. He would certainly do everything in his power to make the relations between pharmacists and the medical profession more close, intimate, and fruitful. The plans for the erection of a pharmacological laboratory at Cambridge at a cost of 26,000*l.* would probably be passed on Friday, and he hoped that when it was completed Cambridge graduates would be known not only by their intimate knowledge of pharmacy, but by the wide scope of their acquaintance with the powers and properties of drugs. (Cheers.)

Mr. W. Martindale, in proposing the toast of

"Science,"

said there were two branches of science on which pharmacy was founded that owe a great deal to pharmacy itself: they were chemistry and botany. It would be invidious to select the eminent chemists who have been trained as pharmacists. He might mention, however, Scheele and Sir Humphry Davy; the latter, however, had been trained, he believed, as an apothecary. It might be said that the science of botany owed its existence to pharmacy. It originated for the purpose of defining and identifying the plants that are used in medicine. The study of botany was encouraged by this necessity. But *nous avons changé tout cela*, and these two branches of science which pharmacy had helped so much were now paying them back with interest. Think of the deluge that chemistry had now forced on them! They had alkaloids and their derivatives, all sorts of scientific compounds, ethers, and alcohols that are used to such a large extent in medicine. It was the same with botany. When he was in the States a few years ago he heard of an American who was scouring creation for a good, new drug, and that gentleman was prepared to sacrifice all his wife's relations and many of his own to prove its physiological action when found. (Laughter.) Professor Thorpe, whose name was coupled with this toast, one of the chemical referees in the compilation of the British Pharmacopœia of 1898, was a policeman to pharmacists in more ways than one. He was head of the Analytical Department at Somerset House, and when analysts disagreed it was he who settled their differences. In that respect he represented science in a truly beneficent aspect. He and his department did their work well, and they rarely harassed pharmacists except when there was a necessity for it. (Applause.)

Professor T. E. Thorpe, in replying, said it was a work of supererogation in an assembly of pharmacists to dilate upon the connection which existed between pharmacy and science, using the term in its most comprehensive sense. Mr. Martindale referred to the circumstance that pharmacy primarily rests upon at least two sciences—chemistry and botany. In claiming that amount of connection he had, however, been somewhat too modest, for the pharmacist's work had intimate relations with more sciences than he had enumerated. He (Professor Thorpe) had in the course of the evening an extremely interesting discussion with his friend on the left (Mr. Hills) as to the conditions under which the modern pharmacist has to pursue his calling. Not even wild horses should drag from him the confidences which had been bestowed upon him; but he ventured to say that the somewhat pessimistic tone with which Mr. Walter Hills regarded the future of that honourable calling with which he is so honourably connected have been to a very large extent controverted by the very admirable and suggestive remarks which Dr. McAlister had let fall as to what pharmacists might do to advance the true interests of science. Mr. Hills ventured to think that the conditions which had called forth a Scheele, a Dumas, a Pelletier, and a Liebig no longer exist at the present time. He (the speaker) did not altogether share that somewhat doubtful outlook of the future of the pharmacist. There is in present-day conditions ample scope for men of the type of Liebig, Dumas, Pelletier, and Scheele in this vocation. There is ample opportunity to push the direct connection of chemistry and the allied sciences in the development of pharmacy by the pharmacist, and he confidently hoped that the immediate future would show that his prognostication in that respect was abundantly justified. (Applause.)

Spake Sir Crichton of St. Dunstan
Bearding Mephistopheles,
And of evils luckless chemists
Had to grapple such as these;
"Ragged fringes" needing mending,
Serpents' tails, and legs of toad,
Tabloids, tablets, new synthetics,
Spoiled the altruistic code.
Laughter, laughter, sleepy laughter,
Cheered us on our homeward road.

Sir J. Crichton Browne, F.R.S., had to propose the toast of

"The Pharmaceutical Society."

He said he recollected reading that St. Dunstan was one of the earliest chemists in this country. He flourished in the tenth century, and then retired to Glastonbury Abbey in order that he might the better pursue his experiments and his search after love-philtres, elixir vitæ, and other useful preparations—(laughter)—and when there he shut himself up with his gallipots in a small cell, so small that he could not stand upright in it nor stretch his limbs, so as to mortify his flesh. (Laughter.) While carrying on his pharmacological researches in this small cell St. Dunstan was much annoyed by the devil, who has always been peculiarly jealous of chemists and druggists. (Laughter.) The devil kept thrusting his head in at the window to ascertain what St. Dunstan was doing, until at last, his patience exhausted, the Saint seized his red-hot pincers out of his little furnace, caught the devil by the nose, and held him firmly until his bellowings filled all the country round. (Laughter.) When he contrasted St. Dunstan in his cell at Glastonbury with the members of the Pharmaceutical Society dining in the Whitehall rooms, where mortification of the flesh is not specially practised—(laughter)—or when he contrasted him with the pharmacists in their spacious well-appointed laboratories surrounded by all the appliances of modern science, he recognised the enormous changes which had been achieved. But still he recognised their direct apostolic succession in two respects, at any rate, for, like St. Dunstan, they were still engaged in striving to perfect, to improve, and to disseminate the means of alleviating suffering and prolonging life, and, like him, they were still opposed by the devil — (laughter) — only their devil is not a corporeal whose nose might be tweaked, but hidden insidious powers of evil—ignorance and prejudice—to be overcome by diligence and education. (Applause.) St. Dunstan's conflict with the devil filled all the country with bellowings, but the pharmacists' struggles with evil fill it with praises, for all men acknowledge the excellence of the pharmacists' work. It was not necessary to go back so far as St. Dunstan to appreciate the pharmacist. In the middle of the eighteenth century Dr. Cullen, who did so much to raise medicine from an art into a science, bestowed his unqualified benediction and eulogiums upon the Edinburgh Pharmacopœia of that period, which was in great demand all over Europe. What did that Pharmacopœia contain? Directions for the preparation of vipers, eggs of ants, of human skull, powder of mummy, crabs' claws, juice of woodlice, and many choice compounds of that character—(laughter)—as well as a concoction which ran as follows:—Take six live frogs, put them in an earthenware pot, place them in an oven moderately heated, and when they are dried sufficiently to be pulverised, administer with aqua vitæ. (Loud laughter.) What, gentlemen, was the Anti-Vivisection Society doing in those days, when pharmacists were making such horrible physic? (Loud laughter.) They drew remedies largely from the animal kingdom to-day, and some of them were not appetising when they thought of the sources from which they were derived; but they were daintily prepared, and, above all, they had scientific warrant, whereas those compounds of bygone days were all empirically arrived

at. Pharmacy has advanced just in proportion as it has become more and more scientific and less and less empiric. Medical science and pharmacy were always united; they have not heen divorced, hut they have agreed to a judicious and judicial separation. (Laughter.) It is science that has elevated the occupation of a pharmacist out of a trade into the profession status, and pharmacists have amongst them to-day men whose scientific attainments ought to make them proudly owned hy any profession in the country. (Applause.) The work of the Pharmaceutical Society in aiming at the education of chemists, in encouraging *esprit de corps*, and maintaining discipline amongst them is one which is an advantage to the whole community, and deserves puhlic recognition and support. (Applause.) After an amusing reference to the many new German remedies, Sir James, continuing, said he was glad to he ahle to congratulate the Pharmaceutical Society on its success in representing the great hody of chemists and druggists throughout the country. Legitimate pharmacy was day hy day becoming more popular, and never had there heen such a consumption of recognised remedies as at the present day. The modern methods of dispensing drugs in tabloids, hy palatinoids, and in cachous had largely conduced to it. At the same time, he thought there were difficulties and drawhacks connected with the exhibition of drugs in those forms. He had the kindliest feelings towards all memhers of the pharmacist profession, and he turned to them frequently when he wanted useful information. He was in sympathy with them, and he knew that notwithstanding their profits, their success, and the success of the Pharmaceutical Society, some of them had a very hard struggle. He held, therefore, they should he protected as far as possible from all undue competition, and in this respect he thought the Society might well direct its attention to the sale of drugs in hospitals, as he was of opinion that out-patients who could afford to pay for their medicines ought to go to the druggist's shop for them, and not he supplied free hy the hospitals. He thanked them for the way they had accepted the toast of "Science," and in return he had the pleasure of proposing "Success and Prosperity to the Pharmaceutical Society of Great Britain," coupling with it the name of the Vice-President. (Loud applause.)

Mr. C. B. Allen, after referring to the absence of the President (Mr. G. T. W. Newsholme) through indisposition, said the Society had the proud hoast of having existed over sixty years, and was this year celehrating its diamond juhilee. Ten years ago, when the juhilee occurred, they received visits from a number of distinguished guests, and some of those gentlemen had not forgotten them. He had a letter from Professor Tschirsch, of Berne, who wished them every success and sent kind congratulations. The Austrian Pharmaceutical Society also sent congratulations; and they had received a telegram from Professor Schaer, of Strasburg, which read as follows: "Respectful greetings and sincere wishes for further welfare of the Society." (Applause) The Society was stronger to-day than it had ever been, and had still three or four objects always before it: the advancement of chemistry and pharmacy by education, the encouragement of the vocation of pharmacists and benevolence, and the fourth ohject, which he was never tired of advocating, goodfellowship, which the Pharmaceutical Society always engenders. There was nothing that the Pharmaceutical Society would leave undone in the future to accommodate itself to the requirements of the age. They had been able to introduce a better preliminary training for pharmacists, and he thought that must have a good effect upon the pharmacy of the future. They had also been engaged for a considerable time in the preparation of a draft Bill, which they hoped to bring before Parliament. In that Bill there were provisions for the institution of a curriculum which should he taken side by side with apprenticeship. Referring to the new remedies spoken of by Sir James Crichton Browne, he said whilst the Pharmacopœia and "Extra" Pharmacopœias existed there was abundant opportunity for the manipulative skill of pharmacists. (Applause.) Continuing, the Vice-President proposed

"The Visitors,"

coupling it with the name of the Mayor of Oxford, Mr. G. Claridge Druce. Mr. Druce was well known to them, and this year he took a high position in pharmacy as President of the Pharmaceutical Conference.

Mr. G. C. Druce, replying on hehalf of the visitors, told a little anecdote, the moral of which was that they (the visitors) had enjoyed everything, but they jihbed at the speeches. As a visitor he felt out of place, as he had always hefore heen one of themselves, hut he would not like to go away leaving them to feel for one moment that they were ungrateful for what they had received as visitors that evening. He thanked the Vice-President for his kind welcome and for the toast. (Applause.)

A song followed, and the company dispersed at about 11 o'clock.

Dreary arid waste of speeches
Lightened by Sir Crichton Browne,
Fervid eloquence of Atkins,
Witty Mayor of Oxford town;
Stars whose scintillating radiance
Sparkled fitful 'mid the gloom,
Surely ne'er was slower function
Seen before in Whitehall Room.
Boredom, boredom, deadly boredom,
The unhappy diner's doom.

The Cynic's Revel.

"Oh come with old Khayyám and leave the Wise
To talk, one thing is certain, that life flies;
One thing is certain, and the Rest is Lies;!
The Flower that once has blown for ever dies.

"Ah, fill the Cup—what boots it to repeat
How Time is slipping underneath our Feet:
Unborn To-morrow and dead Yesterday,
Why fret about them if To-day be Sweet!"

Omar Khayyám.

Would that the flow of words of Sir James Dundreary Browne, or the ripple of rhetoric of Thomas à Salisbury, were mine wherewith to paint a revel that is past. But, alas! the Muse forsakes me.

With Omar to lead me by the hand I wandered forth to the carouse, and revelled with the rest.

Against a list of names they gave me, someone wrote:—

The Voluminous Kilburnian.
The Keeper of the Purse that will pass away,—will pass away, I say.
Sir J. Dundreary of Saints and Devils, Woodlice, Love-Filtorrs, and Viporrr's Blood.
The Jovial One of Voice. Heard and yet unheard—a prayer. Amen.
The Man of Ghaunt. Eagle-eyed and of many travels.
The Man from Wales with a mission on earth—or lots of missions.
The Oxford Street disciple, weary and worried.
The Sevenoaks Encyclopædia. One eye on Young Verdant Professor.
The Sedate and Worthy Baron de la Mont.
The Knights of the Road. Two Generations. One with Gout.
The Archbishop, having just consecrated Revision of the Prayer-Book.
Willie Velasquez from the Guildhall.
The Finchley Sage so Sphinx-like
Sharpastheymakem from a mile north of Marble Arch.
One-of-the-Boys from The Row.
The Apostle. All right when you know him.
Walker, Head Office, London.
The King's Caller, with a bug story.
Tale-Teller, Mysterious, from St. Johnny's Wood.
The Grandfather going strong.
The Jolly Bachelor.

These are hut a few among so many.

Of speeches enough—too much. A plague on them, I say—too often unreason, rhapsodies, and rot.

I drank and dreamt, and watched my comrades slowly and uncertainly departing from the tables I was left alone with the flowers—I fell to wondering what they, these silent onlookers, had thought of the orgie. I wedged my way through the bibulous crowd enrobing itself, to wend my way homewards—and a pest on it! the sole regret of a night of revel—a Whitehall watercart with its dirty slush bespattered my glossy pâtents. So to bed.

Pharmaceutical Society of Great Britain.

SIXTIETH ANNUAL MEETING.

It was quiet and uneventful. The Vice-President engineered it so well that it was all over in less than two hours.

WEDNESDAY morning was as bright and warm a May day as anyone could wish, but five minutes before noon less than fifty members of the Society had assembled at 17 Bloomsbury Square, W.C. Amongst those present at this stage we noticed Messrs. F. H. Lescher, Frederick Andrews, E. N. Butt, Alex. Bottle (Dover), James Paterson (Aberdeen), Horace Davenport, Peter Boa (Edinburgh), E. H. Farr (Uckfield), G. B. Francis, W. Prior Robinson, Charles Kerr (Dundee), Leo Atkinson, E. M. Holmes, T. Morley Taylor, W. L. Howie, James Mackenzie (Edinburgh), R. F. Young (Barnet), F. Bascombe, H. Kemp (Manchester), A. F. Barnard, F. Ransom (Hitchin), J. Robbins, W. Warren, and N. H. Martin (Newcastle-on-Tyne).

The Vice-President and members of Council came in at 12.5. The Treasurer took the chair to the right of the Vice-President, and the Secretary, and the solicitors (Mr. Flux and Mr. P. Morison, jun.), were on the left of the chair. About a hundred members were at this time present, and the Vice-President quickly got to business by asking the Secretary to read the notice convening the meeting, then suggested that

The Annual Report

and financial statement should be taken as read, which was agreed to. Although they were printed in the *C. & D.*, May 4, we may recall the leading facts mentioned in them. The report was on routine lines, showing 2,158 entries for the first examination, of whom 1,135 failed; and 1,890 for the Minor, of whom 71 per cent. failed; while only 101 entered for the Major, and 51·46 per cent. of them failed. There was little said about the libraries, museums, school, research, and evening-meetings, and the Benevolent Fund called for little report that was not of a stereotyped character. In regard to Parliamentary matters, reference was made to the defeat of the objectionable clause in the Companies Bill and the work of the Council in drafting the Pharmacy Bill. The legal paragraph mentioned the Worcester appeal case, but neither it nor the by-laws paragraph dealt with the Strachan action in the Edinburgh Court of Session.

The financial statement showed a revenue of 12,199*l.* from examination and registration fees, 332*l.* from interest, 1,266*l.* from school-fees, and 6,378*l.* from members' subscriptions. The expenditure was practically normal, and left a balance of 2,859*l.* The Benevolent Fund subscriptions amounted to 1,656*l.*, and other receipts brought the income up to 3,225*l.*, which, saving 319*l.*, was spent in annuities and grants.

Vice-President's Address.

The Chairman, again rising, said: In moving the adoption of the annual report—that the annual report and statement of accounts as published be received and adopted—I have to congratulate myself and my colleagues on the fact of a large number of members being present here to-day. It is, as you know, the sixtieth annual meeting of the Society, and in that respect is one of momentous interest. It also is remarkable on another account, and that is that, for the second time in succession, the poor understudy, the substitute man, has to do duty for the President. The President is exceedingly disappointed, I know, that he is not able to be amongst us to-day, and I think, gentlemen, that you will probably like to hear what it is that has kept your President away. He had a good deal of business in connection with the routine of the Society, and had constantly to be travelling backwards and forwards from Sheffield in inclement weather in the early spring. He contracted a cold and lost his voice; he remained at home and came ont too early he came to us after a period of rest at the time of the oral examination in April, which, as far as I remember, was about April 18. I think, gentlemen, that there is no doubt he was not well enough at that time to come to London, but he came to London and fulfilled his duty at the examination and then went to a warm corner in the South of England. He had a considerable amount of sunshine and stopped there a few days. He then went back to Sheffield. In Sheffield he was very unkindly treated. He had an easterly wind to face, and the consequence was that his cold developed into laryngitis. He then rested in his house without going to bed. At last his doctor peremptorily ordered him to bed. About a week or four or five days ago he was able to get to the seaside. I am glad to be able to report that he is getting better, and I think he is just in that condition that he feels he would have liked to have been here. But, of course, he acts wisely in rejecting those proposals that he has in his mind, and in listening to the advice of his doctor and his friends. Of course, in the light of recent events, it seems somewhat probable that the Society may have to take into consideration the desirability of appointing another officer—say, a medical officer—to look after the health of the President. (Laughter.) Now, gentlemen, before I attempt to deal with the report anything like *seriatim*, I would ask you to remember that I am fulfilling the duty of Vice-President to the best of my ability; that I have to come before you at somewhat short notice—for I quite expected that the President would have been able to be at the annual meeting—and that during the whole of last week I was travelling about in the Society's business, and, therefore, I have not had the time I should have liked to be able to devote to this extremely serious matter. But I know that all British men give every consideration to the overweighted side, and I feel perfectly certain that you will give me due consideration and listen to what I have to say—criticising as freely as you like—but listen to all I have to say with due consideration.

The figures of the financial statement

are pretty well self-explanatory, and if you have compared them with the statement placed before you last year you will be as well able to realise the financial position as I am. For those, however, who have not had an opportunity of making such a comparison, I may, perhaps, be allowed to briefly review the items, and indicate those which show a tendency to increase and those which exhibit a downward tendency. Taking the review first, there has been a net increase of something like 830*l.*, due chiefly to the large increase in the number of candidates for examination during the past year. I must point out, however, that in this connection we must be prepared to see a very considerable drop in future owing to the discontinuance of the First examination and the raising of the standard of acquirement in regard to preliminary education training. I estimate that the annual loss to the Society by the adoption of the new regulations for the registration of pharmaceutical students will not be much less than 2,500*l.* But I also believe that the gain to pharmacy which must inevitably result from keeping out of its ranks imperfectly educated students is not to be computed in guineas. The total number of subscribers to the Society shows the increase of the amount received on that account to be slightly below the 1899 record. This is easily accounted for by the comparatively large number of members who in that year paid life composition fees and became relieved from further annual payments—disappearing, in fact, from the right side of the annual statement. Turning to the expenditure, it is not surprising

that what I may call the domestic expenses of the Society are somewhat higher than in the preceding year. Rent, rates, taxes, repairs, house-servants' wages, cleaning, &c., all have an upward tendency, and as our work continually develops and the premises have to be adapted to the growing requirements of the body corporate, so may we expect to find the "up-keep" a little more expensive as years go on. I do not think the increase is at all expensive or alarming, nor do I think anyone will be disposed to dispute this opinion when we bear in mind the large number of meetings of one sort or another that are now held here, and the various forms of pharmaceutical activity continually going on throughout the year. The Society, as the statutory representative of pharmacy, has a home of which its members, and indeed all registered persons, should be proud, and it would be a very short-sighted policy to be parsimonious in regard to its maintenance. Stationery and office incidentals, as well as general office expenses, are higher. This is the outcome of the increased activity in connection with Parliamentary matters, and it is partly owing also to the preparatory work for the initiation of the scheme of local organisation which is now in operation. Yet notwithstanding the very great increase in office and administrative work, you will notice that the amount paid in respect of the Secretary and Registrar and his office-staff is nearly 200*l.* less than it was a year ago. That, at any rate, is sufficient to show that the enormous detailed work in connection with the corporate body is not extravagantly conducted; but I am afraid that though this result may be satisfactory from a bookkeeping point of view, it involves rather heavy calls at times upon the energies and loyalty of the office-staff.

WITH REGARD TO THE SCHOOL,

the expenditure has been practically the same as in the preceding twelve months, but I regret to have to record that the number of students has not been so large as usual, and that the fees received have been 300*l.* less. It is rather disappointing to the Council to find that the sacrifices of the Society in the direction of providing for a sound pharmaceutical examination have not been attended by better results. Still, I am inclined to think that the falling-off will only be temporary, and we have no evidence to justify us in assuming that the money spent on the School is being wasted. The first efforts of the founders of the Society were devoted to providing an efficient school of pharmacy, and throughout the sixty years that have since elapsed the object has never been lost sight of by the Council of the Pharmaceutical Society, while to-day its efficiency is acknowledged by all, and its place amongst institutions of a similar kind is pre-eminent. Whether that is worth the care and money expended it is not for me to say, but I can and do say that we have faithfully carried out that most important duty handed down to us by our pharmaceutical forefathers as a sacred trust—viz., the promotion of pharmaceutical education in its widest sense.

Coming to the *Journal*, I am glad to say that the net cost to the Society of this department has been 2,342*l.*, as against 2,549*l.* in the preceding year; in other words, we have given our members a journal—and, as I believe, a more generally useful and interesting journal—and at the same time have reduced the cost by 200*l.* (Cheers.) This must be satisfactory to you, as proprietors of the *Journal*. I am in hopes that further economy may be effected without in any way detracting from this personal privilege of membership. Speaking generally, I think I may congratulate the members of the Society on the financial position as revealed on December 31 last. Before leaving finance, a note which I have received from a registered person—who, by the way, is not a member—reminds me to say that there is sometimes a disposition to criticise a financial statement from one point of view only—a practice which is to be deprecated. It is not a fair proceeding, for instance, to take the

AMOUNT RECEIVED FOR EXAMINATION-FEES

and the amount paid to examiners, strike a balance, and call the resulting figures "profit." Not only is it unfair; it is inaccurate. It is no more profit than the difference between the subscriptions of students and the cost of keeping up a museum and library is a loss. The fact is that no microscopic subdivision of accounts is possible or desirable, and I, for one, see no valid reason for trying to isolate the various departments of the Society's work in order to show which are profitable and which are not. (Hear, hear.) What advantage could possibly accrue? After all, we are not a commercial corporation, and cannot "cut our loss and run our profits." Take, for instance, the administration of the Pharmacy Act and the maintenance of the register—these are never likely to be profit-earning operations, but are statutory duties that must be performed, and they benefit the registered persons of Great Britain in direct proportion as they protect the public. Does anyone think it equitable that the cost of performing these duties should be exclusively borne by the few registered chemists who happen to be members of the voluntary Society, or, in the alternative, left undone. It seems to me to be nothing short of absurd to repeat, as my correspondent informs me has been done, that the Society exists upon the profit it rings out of its examination-candidates If the voluntary Society were to cease to-morrow, and its statutory function of examinations remain, the ringing-process would certainly not be any less, whilst, on the other hand, if the Society's statutory work were handed over to the more enlightened intelligence of a Government department, the income from the subscriptions of members of the voluntary Society would perfectly well enable it to pay its way even though it spent as it did 2,342*l.* in giving away a journal and 1,217*l.* in promoting education. It is perfectly fallacious to reiterate this argument of the "exploitation of the candidate," and if that is all the objectors of the Society have to urge they must have a very bad case indeed. (Hear, hear.) With regard to the

REPORT OF THE COUNCIL,

I do not propose to say very much. It has been distributed to the members of the Society for the purpose of being criticised and commented upon. And it will be my duty, so far as my ability goes, to offer any explanation that may be considered necessary. At the same time, I should like to say that the work of the Council during the past year must not be measured by the necessarily restricted account of the official doings given in the report. We may not have brought our most attractive articles forward, but that restraint, if it be a fault, is a fault that leans to virtue's side. There are many matters in a complex body like the Society which cannot profitably be discussed in public with unrestricted freedom. And I feel sure that you would not like me to endanger your interests by detailing what we have been doing and are doing with Government Departments, with regard to, say, carbolic-acid poison-regulations, additions to the schedule, and similar subjects. The delicacy of some of these questions is, perhaps, not sufficiently realised by some of our members. I did not fully realise it myself until quite recently, but I can assure you, in all sincerity, that the divinity that hedges the Government Department has no fragile surrounding, and is not the sort of rampart that yields to clamour. At the risk of being classed as the mere utterer of wordy platitudes, I therefore ask you to believe that the committee of the Council to which these matters are referred will employ their best energies on your behalf, and on behalf of all those who follow our vocation. In regard to our

LEGAL CASES,

there have been one or two judgments during the year which can hardly be deemed satisfactory. The appeal against the judgment of the Worcester County Court Judge is a case in point. As you will remember, a quantity of arsenical preparation was distributed through the medium of unqualified persons, and the Council sued the retail shopkeeper who took the order and the money. The London County Court Judge found on the findings that the defendant did not sell the poison. The Council took competent advice as to whether that finding barred the consideration of the point of law involved, and, having been assured that it did not, they launched an appeal in a divisional court. The appeal was dismissed, on the ground that the defendant was an agent, and did not sell—in short, was not a seller within the meaning of the Act. Seeing that so much was involved in the question, it was thought desirable that the points of law should be submitted before the Court of Appeal. This was done, and I think you will agree with me that the Society's case was most admirably argued by the counsel engaged. I venture even to go so far as to say that two of the Judges

on the bench, at any rate, were rather impressed with the arguments adduced on the public aspect of the case, and it was somewhat of a surprise to find that the appeal was dismissed on what seemed to be purely technical grounds—namely, that the question was one of fact, and that as the learned County Court judge had found as a fact that the defendant did not sell, his judgment could not be interfered with. The point at issue therefore remains precisely as it was, and the whole cost of litigation has settled nothing. Whether the principle in question could be raised on another case is a matter for the Council to consider. One point of significance there was in the course of the case, and that was the rather unwarrantable remarks made in reference to the Society's witness, who was stigmatised as a spy. Indeed, I believe one of the judges went so far as to use the words "lying spy." I do not want to comment upon that beyond saying that it exemplifies the difficulties which the Council has to face in trying to administer the Act. We were also unfortunate in the case instituted under the 1852 Act against a company which used labels bearing the name of the former owner of the business in conjunction with the phrase "Members of the Pharmaceutical Society." Here the Judge of the Bloomsbury County Court came to the conclusion that the defendants had not taken, used, or exhibited a title implying registration under the Pharmacy Act, 1852, but had merely given publicity to a statement which was quite true—namely, that their predecessors were so registered. The legal adviser of the Council did not recommend an appeal in this case, but it may be necessary to test the matter in another way. I may also refer briefly to the case of the Society *v.* Reece. This was a 17th Section case, and the defendant, who had a number of shops and traded in a name that was not his own, was charged with omitting that portion of the provision of the section which requires a poison to be labelled with the name and address of the seller. In fact, the article purchased bore Mr. Reece's trade name and the address of one of his establishments, but not the one at which it was purchased. The Council thought it expedient in the public interest to order a prosecution, for it is perfectly obvious that the object of the section could not be accomplished if the procedure complained of was allowable. Judgment was given in favour of the Society, but I am bound to say it was an unsatisfactory judgment after all. I do not think the Judge appreciated the real point at issue. However, we could not challenge the decision, and the defendant did not, so there the matter stands. I am glad to report that the administration of the Act in Scotland has been very materially strengthened by a decision of the High Court of Justiciary, to the effect that it is competent for the Sheriff to give in his judgment a term of imprisonment in default of payment of fines. In Scotland, therefore, the proceedings under the Pharmacy Act which, prior to this decision, had become almost inoperative, have now a real deterring effect. I must not omit to call to your minds that the most exacting of our labours during the past year has been the production of

THE DRAFT PHARMACY BILL.

I am not going to talk about its provisions now, for my chief occupation during the past few weeks has been addressing gatherings of registered men in various parts of the country on that very subject. But I do want you to remember that the drafting of the measure has been no light task, and that though there may be a difference of opinion as to the value of the resulting product, there is no room for doubt that it represents many months of earnest work on the part of your fellow-members whom you have chosen to represent you on the Council. I believe that with a little energy and a little solid backing of the pharmacist, and his support, we may be successful in getting the Bill, or something like it, passed into law, and if we do I think the public will be more adequately protected and the personal qualification of the chemist and druggist more publicly recognised and valued. (Applause.) Before leaving this portion of my remarks, I would like to say how gratified I am that the

NEW SCHEME OF LOCAL ORGANISATION

is so far in working order as to have afforded a large number of chemists and druggists in the provinces an opportunity of meeting members of the Council and the Secretary for the purpose of discussing the Bill and other matters affecting pharmacy. Up to the present the following districts have been covered by meetings:—Newcastle, Derby, Devon, Dorset, Durham, Essex, Gloucester, Hants, Herts, Kent, part of Lincolnshire, Leicester, Lincolnshire, Middlesex, Northumberland, Notts, Rutland, Somerset, Surrey, Sussex, Wilts, and the West Riding of Yorkshire. That is a very fair start, and I look forward to a valuable development of the scheme in the near future. The work takes time, but there appears to be good justification for going steadily on in the direction we have commenced. There are only two items more to trouble you with, and they are

BY-LAWS AND EVENING MEETINGS.

With regard to the first, the paragraph in the report explains the present position—that is to say, the by-laws have been referred to a committee for consideration of the particular by-law dealing with the fees payable on re-entry for examination. I cannot foresee what the committee's report will be any more than I can tell whether the Council will accept the report. But you need have no fear that the Council will deal with the subject in anything but a fair and considerate way. Whatever is done must of course be submitted to members of the Society for approval. Lastly, in reference to the evening meetings, I wish to point out that a good deal of money has been expended and a vast amount of pains taken to improve these meetings. We have now an electric lantern and all the necessary material for illustrating the whole of the papers or lectures given. We have plenty of able pharmacists and others willing to place their observations and experiences at our disposal. We only want one thing—larger attendances. Within an easy radius of this theatre there must be some hundreds of pharmacists and students to whom the evening meetings afford something of interest if not of instruction, and I do not think I can close my remarks on this subject better than by appealing to them to save the evening meetings in London from becoming mere historical recollections. That finishes my comment upon the report, so far as it goes. But, in the presence of the gentlemen here, I feel that I cannot do less than allude to something which I am sure the members of this Society will feel to be a particularly gracious act. I allude to my friend, Mr. Northway Butt. (Hear, hear.) Mr. Butt is a gentleman, of whom perhaps there are types in London, who has given up a very large amount of his business-time to the welfare and the practical good of this Society. He has filled several offices in the Society. He has been on the Council, and is at the present time an auditor. As a councillor, and since he has retired from the Council, he has helped the Society to the full extent of his power; and I can assure you, gentlemen, he is a very expert gentleman with regard to finance, and he has done a very great amount of work both for the Benevolent Fund and the General Fund of the Society. (Hear, hear.) Now, gentlemen, in his life he has taken on himself the founding of a scholarship for the prosecution of pharmaceutical research. (Applause.) This scholarship cannot but be of the utmost good for the members of the Society generally, and it must also be a considerable attraction to the very young men who are workers in the Society. I am quite sure, gentlemen, that you will not like me to finish my remarks without conveying your thanks in general meeting assembled to Mr. Butt for his very beneficent donation. (Applause.) One of the last things that a President (or a Vice-President) has to do very often is to refer to

THE OBITUARY.

I had hoped that it would not be necessary for me to refer to the obituary to-day; but, gentlemen, since the paragraph in the report was published, which calls to your notice those who have died during the recent year, we have lost a gentleman, who, I think, those who have been constant attendants at these meetings will be very sorry to miss. The gentleman I allude to is one who never ceased to import a little of that humour which is so necessary to make meetings go in the proper way. He was the founder, I believe, of the Western Chemists' Association, and one of our divisional secretaries. I allude to Mr. Long, and I think, gentlemen, you would not like us to wait a full twelve months before we report to you the death of Mr. Henry Long, and before we state how sincerely sorry we are that we have no longer his presence

amongst us. I finish by moving that the annual report and statement of accounts be received and adopted. (Applause.)

Mr. Atkins formally seconded the motion, remarking that, if occasion arose, he should ask to be allowed to speak at a later stage.

An Auditor's Commendation.

Mr. Lescher said he should like to say a few words, as one of the auditors. He did not think he should be wrong in beginning by voicing the opinion of all the members in offering their congratulations to the Vice-President for the very able way in which he filled the chair on the previous night at the dinner, and the ability also with which he had presided over that meeting. (Hear, hear.) As an auditor he might be allowed to say that the requirements of the auditors had been fully complied with, and they had had all the figures before them. He had now been an auditor for twenty years, and he was a few days ago comparing some of the figures in the year 1880, when he began, with the figures of the present year. Their income then was 10,000*l.*; now it was over 20,000*l.* The subscriptions then were 4,700*l.*; they were now 6,300*l.* The accumulated funds of the Society twenty years ago were 22,000*l.*; now they would see the large amount that they had in the financial statement. But he thought the most satisfactory thing about the figures was that of the Benevolent Fund. In 1868 the amount distributed was 310*l.*; twenty years ago when he first became an auditor—they distributed 1,600*l.* odd, and last year they were able to distribute 2 906*l.* (Cheers.) The investments of the Benevolent Fund—which, twenty years ago, were 18,000*l.*—were now 34,000*l.* He might say that the balance-sheet and financial statement were very well drawn up. His colleagues and himself had inspected the securities and found them all to be in perfect order. He was very much obliged to them for giving him their attention, because as an old Square student he took a very deep interest in all that concerned the Pharmaceutical Society. (Applause.)

Some Criticism.

Mr. James Mackenzie (Edinburgh), rising from the sixth bench, said it was an awkward thing to turn one's back to one's friends, and proceeded to step down to the front, the Vice-President suggesting that he should not turn his back to the Council either, but face them. After the laugh had subsided, Mr. Mackenzie said he hoped the time was not far distant when the Council would provide a better meeting-place than that wretched theatre. (Hear, hear.) He was pleased with Mr. Allen's address, which explained a great deal that was not in the report, for without his commentary the report was not altogether complete, nor was it yet, and he urged upon the Council the desirability of giving the members a full record of the year's business in the annual report. Speaking of the manner in which the meetings of the Society should be conducted, Mr. Mackenzie referred to the laws and constitution of the Society, and showed that everything is to be subject to those present at the meetings, a fact which is especially emphasised by the by-laws, Section 20; and although this section authorises the Council to meet before the annual and special meetings to arrange the public business, he protested that there is no authority for the President or Vice-President to move out of order any motion or proposition which is brought forward. That, he said, is a matter for the majority of the members to decide. In this he especially referred to the vetoing by the Chair of a motion respecting the by-laws, and pointed out amidst applause that the Society was founded upon democratic not autocratic principles, and the members of the Society should see to it that the Chairman should not do what he likes. He noted that the by-laws passed since the last annual meeting had been opposed and disposed of, and hoped that in future the members would insist that they should be passed seriatim and not *en bloc*.

Mr. Martindale: Why not?

Mr. Mackenzie: I am glad of that question, because it enables me to say that in 1886 the Privy Council decided that members are entitled to vote upon the by-laws separately, and that they should not be passed *en bloc*. I do not care what your counsel say about it—you can get counsel to say anything. (Laughter.) The speaker proceeded to say that the President of the Society in 1852 had also declared that amended by-laws could not be passed *en bloc*, so he trusted the matter would be dealt with fairly when they came to deal with new by-laws again. Referring to the Reece case, he said the Council started with an attempt to get a decision on the address-question, but had got it on the trade-name. Who was responsible for the important development he could not say, but he rather thought that the Council had not got what they wanted. (Laughter.) Mr. Mackenzie next touched upon the loose way in which the Council had treated titles after the 1882 House of Lords decision, contending in an eloquent outburst that if they had gone sincerely for an amendment of the Act they would have secured it years ago. Turning to the Pharmacy Bill, he objected to the registration fees, and saw nothing offered in return.

> Better to bear those ills we have
> Than fly to others we know not of.

He had listened to the Vice-President's remarks regarding the examinations, which showed a clear profit of 8,000*l.*, but still he thought one horse should not carry all the burden, and that young men's fees should not have to pay the deficits on the school, the Society's expenditure, and the loss on the *Journal*. The last topic he enlarged upon, suggesting that the paper might be made a commercial concern, for at present, he gently complained, it is rather a preserve for headquarters. He could not get criticisms into it. (Laughter.) The doctor knows what suits. (Renewed laughter.) He then referred to the payment of the annuities, especially that of 400*l.* to Mr. Elias Bremridge, which had been going on since 1884, and now amounted to a capital sum of 6,000*l.* to 7,000*l.* He had searched through the whole of the Society's constitution, and could find no authority for such payments. The members of the Council should separately and severally be called upon to refund this money. (Laughter.) Mr. Mackenzie then briefly referred to the Strachan case and the Society's defeat, drawing a pretty contrast between a journey of the Society's clerk to Edinburgh and that of Johnny Cope to Prestonpans and his defeat there by Prince Charlie, reminding him of the words:—

> Hey, Johnny Cope, you werena blate
> To come here to your defeat.

As the meeting tried to follow the Doric accents, and to discover the connection, Mr. Mackenzie returned to his seat.

Demosthenes Redivivus.

Mr. Leo Atkinson said he was sure that everyone would regret the illness of their President, and he joined in the expression of opinion as to the admirable manner in which the Vice-President had carried out the duties of the office. They had just come to the conclusion of the great Victorian era, and the Society has already received an amended Charter under the sign manual of King Edward VII. Probably at no period, at least anterior to the passing of the first Pharmacy Act, has there been so much general interest in pharmaceutical affairs, and it is probably due, he said, to the admirable work of divisional secretaries that at no other period have so many chemists and druggists been brought into something like apparent unity of action. (Applause.) The uppermost question is the proposal for the Pharmacy Bill that the Vice-President had expounded at great length and very exhaustively all over the country. To criticise the details, in public, of that Bill, is very mischievous, and gives an amount of information to their enemies of which they were not slow to take advantage. (Hear, hear.) Acts of Parliament are, more or less, leaps in the dark, and it would be a surprise for the student of the future that, notwithstanding the enormous advances in every department of art, science, and literature, we should submit to have our statutes and charters prepared in the misleading jargon of the Middle Ages. (Laughter and applause.) After carefully reading the reports of a great many meetings, there seemed to him to be one dominant idea that if one could crush company-trading, the chemist and druggist would be on the high road to prosperity. They were discussing this pharmaceutical bogey twenty years ago, and if anyone would consider the question, he must surely see more important reasons for the decadence of pharmacy than company-trading. Take, for example, the action of members of the trade who invariably try to get goods from the producer to the consumer direct and cut out the middleman's profit—and

yet the chemist and druggist is essentially a middleman. He could point to them a window where there are some hundreds of beautifully decorated tins, each containing a gross of beautifully coated pills of ferrous carbonate at 2½*d.* a tin, and three tins for 7½*d.*—(laughter)—which was, no doubt, a great advantage to the purchaser, but showed very little profit to the chemist. There were, again, the changes during the last twenty-five years in the conditions of trading, and there was that little stranger from across the Atlantic—the tabloid. (Laughter.) Is it the stores there? Again, there are the new methods adopted by wholesale houses, who no longer confine themselves to the distribution of drugs and chemicals, but enter into competition with the general pharmacist, for nearly every galenical he requires is prepared and packed and distributed impartially either to the chemist or the stores, the oilman or the grocer. (Laughter and applause.) Company-trading is a very small factor now, and they must look elsewhere for the decadence of pharmacy. There is another reason, still worse and more humiliating, and that is the meanness of the methods of men on their own register. (Applause.) They are the men who drag pharmacy in the gutter. (Hear, hear.) The weakness of the Pharmaceutical Society lies in the fact that they have no disciplinary control, and he had never discerned that they had tried to obtain it. (Laughter.) It has, he continued, become apparent to a good many that the Pharmaceutical Council cannot defend the men on their own register, and the parting of the ways has almost become evident. If the professional side of pharmacy is ever to make a stand, it will have to work out its own salvation—perhaps under a new Society and new regulations with better powers of self-defence. You can get infinitely more extended powers than the present Bill gives, but neither the present Council, nor any council, could ever make it approximate to the wishes and ideals of fonnders of the Society. (Loud applause.)

The Discussion Continues.

Mr. A. P. BARNARD (London) referred to the high fees charged in the Society's school at Bloomsbury. It is well known, he said, that the reason students do not attend the school is because, although they may have the will to do so, their pockets will not bear the expense. Surely the fees of the Society's school, supported as it is by the contributions of the members of the Society, ought to be less, rather than more, than the other schools. If a pharmacist sends his son to the Pharmaceutical Society's school it costs him three times as much as in one of the other schools. Is that right? If these students could get their education at Bloomsbury at the same price as elsewhere, would they not be proud to go to Bloomsbury? As it is, they go to another school, and when they go up for their examination to the parent body it is with a feeling of fear and trembling, with the result that they are probably plucked. For this reason he asked, Will the Research Scholarship ever be of use to those men who are educated at the "grinding" schools? If the Society can lessen the fees and create centres in different parts of the country for educational and examination purposes, they will stamp out the "grinding" schools, and the whole body of chemists and druggists will be practically educated under the tuition of the Pharmaceutical Society. Then they will become an united body. This is a matter which the Council may well consider. Another matter he wished to refer to was the disrespectful manner in which chemists are treated by coroners, and the non-payment for their attendance at inquests. If his neighbour the doctor attends, he is treated with every respect and paid a guinea fee; but when the chemist attends he gets no fee, and is meted out very scant courtesy. In conclusion, he desired to say that the work on the Pharmacy Bill, and the general work of the Council during the past year must be considered very satisfactory. (Applause.)

Mr. A. WRIGHT (Yeovil) said he noticed the *Journal* this year cost only 7*s.* per head to members of the Society, whilst last year the figure was 7*s.* 7*d.* The *Journal* of the Society of Chemical Industry costs 12*s.* 4*d.* each member. There might be a little more spent on the *Journal*, he said, and he would like to see the collective index they had heard about. Its cost would be about 200*l.*, and the money would be well spent. He suggested also that the return carriage of books lent to country members from the library be paid by the Society. It will only mean about 20*l.* a year, and country members will appreciate it very much. (Applause.)

Mr. J. PATERSON (Aberdeen) asked, in regard to the by-laws, when they will be ready to place before the Society for confirmation. If they had been put before that meeting it would have saved another meeting later, and also have allowed them to have their say on the matter.

The VICE-PRESIDENT replied that the by-laws have not yet been reconsidered, and they were not anxious or particular about them at the present time. With reference to the Strachan case that had been decided against the Society, and they had submitted. There is no desire to rush the by-laws through, and try to insist upon the guinea payment instead of the shilling.

Mr. PATERSON: Then in a twelvemonth?

The VICE-PRESIDENT: Very likely.

Mr. PETER MACEWAN, speaking in reference to the evening meetings at Bloomsbury Square, said, although he had attended the annual meeting for a good many years, this was the first time he had heard an appeal made to members generally in regard to those meetings. Speaking in support of what the Vice-President had said, he thought the evening meetings of the Society are the best individual record of the progress of pharmacy that exists in the world. (Hear, hear.) During the past six or seven years especially the evening meetings have become exceptionally thin in attendance. One or two members of Council, the officers of the Society, twenty to forty students of the School, and from four to ten members of the Society made up the audience. That state of affairs was most unworthy of the Pharmaceutical Society of Great Britain—(hear, hear)—especially when members take the trouble to prepare communications. The meetings are becoming more attractive, he said, and we are getting back to the conditions when Professor Redwood arranged the meetings. He hoped one result of the few words which had fallen from the Vice-President would be that members in the metropolis at least will more generally support those who are putting themselves to pains to provide attractive programmes. (Applause.)

Reply from the Chair.

The VICE-PRESIDENT cordially agreed with Mr. Atkinson's remarks. He, however, reminded the members that the Pharmaceutical Society is a voluntary body, and has the proper grip which enables them to send a member out of the Society, while being powerless to deprive him of registration. He hardly agreed with the first portion of Mr. Barnard's remarks. He did not see how the fees of the School can be made less than they are at present, because the Society has to supplement those fees by a considerable amount, which comes to a considerable sum per student. The school is an ideal one, and all their sympathies are with its continuation. Mr. Barnard gave them a practical business scheme which may be submitted to members. He informed Mr. Wright, who spoke about the collective index to the *Journal*, that it is in course of compilation at the present moment, and will be issued shortly. The payment of carriage of returned library books for country members will receive the attention of the Library Committee, and he thought the Society would be very happy to do this. He was extremely pleased that Mr. MacEwan endorsed his remarks about the evening meetings. There is practical business in the evening meetings, and if it is not possible for the practical pharmacist to make some money out of the meetings, he has absolutely and entirely missed his vocation. (Applause and laughter.)

Mr. C. KERR (Dundee) asked if the evening meetings were open to visitors as well as members.

The VICE-PRESIDENT: Visitors and friends are welcome, but we do not invite them.

Mr. KERR: How does the early-closing movement stand in regard to the meetings? Does it allow assistants to get away in time to attend them?

The VICE-PRESIDENT: The assistants have an evening of their own. In fact, a number of the papers submitted to the junior Association have been quite worthy of presentation to the senior body. His allusion was to pharmacists who do not take the slightest interest in their vocation, who, when entertainment of most diverse excellence is provided for them, decline to come to it. (Applause.)

The Diamond Jubilee.

Continuing, the Vice-President said he omitted in his opening remarks to state that the Society has received congratulations from the following honorary members with regard to their sixtieth anniversary:—The President of the Apotheker Verein (Germany), the President of the Austrian Pharmaceutical Society, Professor Schaer (Strasbourg), Professor Tschirsch (Berne), Dr. Vogel, and Dr. Ladenburg.

Mr. S. R. Atkins (Treasurer) said he always felt when Mr. Mackenzie, who was an old personal friend, had had his say that the worst had been passed. (Laughter.) He agreed that they should have a better place of meeting, but he was grieved that Mr. Mackenzie made reference to the question of annuities in the manner in which he did. The annuities amount to 500*l.*—to Mr. Elias Bremridge and Mr Incc. There is no desire on the part of the Council to suppress that information. They have not been acting *ultra vires* as a Council, as Mr. Mackenzie hinted, and in making these annuities it is within their power to carry out the instructions and full powers of the Society. Mr. Elias Bremridge gave his life, his energy, and heart and soul in the interests of this Society, and they felt years ago that they ought to recognise his services by a handsome annuity. (Lond applause.) He hinted that something should be done to celebrate the Diamond Jubilee of their Society, and it is mooted already that the commemoration may take the form of a decoration to be worn by the President for the time being, as is done in other societies. Mr. Atkinson's remarks concerning company-trading and the trading of members as well were most pertinent. He did not think, as Mr. Barnard did, that the fees of the school are at all beyond the education supplied. He did not think the professors were paid beyond their work, but the question of subsidising and the reduction of the fees of students is certainly a question that may be considered.

The Vice-President then put the motion for the adoption of the report to the meeting, and it was carried unanimously.

Nomination of the Council.

Mr. James Paterson here rose and intimated that he desired to hand in a nomination paper for the election of a member to Council, according to the charter. Mr. Paterson held out an envelope addressed to Mr. Bremridge, Secretary and Registrar; for a moment it seemed that anything might happen, and the meeting was on the *qui vive*. There was no effort on the part of the officers to receive the portentous envelope, but Mr. Flux, the solicitor (who had before him The Chemist and Druggist containing Mr. Paterson's letter dealing with the nomination of Council), said to Mr. Bremridge, "Take it." It was taken, and again there was a slight pause, the meeting apparently expecting Mr. Paterson to say something; but he was looking to the Chair for an invitation to speak. At last Mr. Flux suggested to the Vice-President that he should go on. He did by nominating twenty gentlemen to act next day as scrutineers, and requesting them to attend at 16 Bloomsbury on Thursday, May 23, at 10 A.M. He next called attention to the various registers which were placed before the meeting in compliance with the Act of Parliament.

Auditors.

The following gentlemen were declared elected as auditors for the ensuing year: Messrs. E. N. Butt, Charles Hodgkinson, F. H. Lescher, Charles Umney, and Francis Yates.

Vote of Thanks.

Mr. J. Mackenzie moved, and Mr. N. H. Martin seconded, a hearty vote of thanks to the Vice-President for his conduct of the meeting, and both gentlemen complimented Mr. Allen on the manner in which he had carried out the Presidential duties. The vote was accorded with loud and prolonged applause.

The Vice-President, in thanking the meeting for its appreciation of the manner in which he had carried out his duties, said he had done his best, and it was probably due to the fact that he had sat so many years under the presidency of Mr. Michael Carteighe, that he had done so well. Here Mr. Allen caused much merriment by saying that in the days of Mr. Carteighe's presidency the other members of the Council had no chance on these occasions, as Mr. Carteighe liked to do all the speaking himself. Now he (Mr. Allen) had had his revenge, and had been able to demonstrate that other members of the Council than the President had ideas about the Society's business.

A number of voting-papers having been placed in the box, the meeting was adjourned till 3 P.M., Thursday, May 23.

ADJOURNED MEETING.

The adjourned meeting took place on May 23. The following was declared by Mr. E. N. Butt to be the result of the scrutineers' count of the voting for the new Council:—

Elected.

Newsholme, G. T. W.	2,440	Gifford, R. L.	1,595
Martindale, W.	2,413	Corder, O.	1,577
Allen, C. B.	2,000	Savory, A. L.	1,504
Atkins, S. R.	1,796		

Not Elected.

Stephenson, J. B.	1,491	McLaren, D.	606
Campkin, A. S.	1,069	Pickering, C. E.	555
Paterson, J.	1,045	Pickard, S. N.	529
Kemp, H.	1,039	Gostling, G. J.	437
Mackenzie, J.	638	Morrison, J. W. T.	364

5,628 voting-papers were issued, 3,278 received back, and of these 49 were disallowed and 11 received too late. Mr. Peter Boa proposed the vote of thanks to the scrutineers, and Mr. Butt, in replying, had something to say about a man who wrote on the back of his paper that "the Society had never done any good, and never would."

Western Chemists' Association.

The final meeting of the session was held on May 22, at the Westbourne Restaurant, the President (Mr. H. Cracknell) in the chair. There was a small attendance, and business was mainly routine. The President first referred feelingly to the loss sustained by the Association by the death of Mr. Henry Long, and moved the following resolution:—

That this Association has heard with much regret of the death of Mr. Henry Long, the first President and one of the founders of the Association, and desires to express deep sympathy with Mrs. Long and the family in the loss they have sustained, and further desires to place on record the valuable services rendered by him to the Association.

The question of the annual dinner in November next was then discussed, and it was agreed that it be held at the Café Royal as formerly, a Dinner Committee, consisting of the President, Vice President, Secretary, and Treasurer, being appointed to carry out the arrangements. With regard to the summer outing in July, the proposal was made to go to Henley by train, come down the river to Windsor by launch, and rail home. However, a guarantee of fifty tickets must be made before the project can be undertaken, meantime the members are to be circularised to that effect.

With the consent of the President, Mr. Glyn-Jones then brought forward the scheme mooted at the meeting of the Camberwell chemists last week (*C. & D.*, May 18, page 807) with regard to the establishment of a representative Metropolitan Chemists' Association. The idea is that local associations, or at least local committees, be formed for each of the London districts. Members of each of these committees would then be selected to form a central committee which would represent the collective opinion of the Metropolis on matters affecting the trade as a body. Mr. Glyn-Jones explained that, in his opinion, each local association should manage the affairs of its own district, but that all should be members of the central Association. He suggested that the Western Chemists' Association take the initiative in the matter, and that the committee might meet a few of the prominent chemists in each district, and exchange views on the subject. The matter aroused keen interest, the meeting being unanimously of opinion that the idea was an excellent one. The practical suggestion came from the Vice-President (Mr. Gulliver), that the divisional secretaries might be consulted; and, on Mr. Gulliver's proposal, it was agreed to instruct the committee to call a meeting at an early date to consider the matter and take what steps they might think necessary.

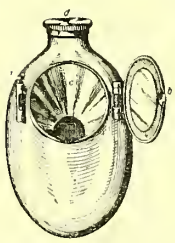
Our Town Traveller.

MY recent journeyings about town have impressed me (both physically and mentally) with the fact that "Ye somer is a-comynge in." The feeling of comfort which supervenes on entrance to the serene cool calm of the City showroom after the heat and dust of the streets is as grateful to the body as the rest is soothing to the sole. Moreover, the gloom which characterised the commercial affairs of the metropolis for the past few months has succumbed to the buoyant influences of spring, and instead of mournful shakings of the head when business is mentioned the replies are unanimously cheery, "Very busy, indeed!" "More than we can do," or "Don't know where to turn to first.' This looks well for summer trade, and of course summer goods in new patterns predominate. Sponges, tooth-brushes, nail-brushes (the "hygienic" variety with perforated back is to be the boom this season), bathing-sets, and toilet articles are *en évidence*. Most of the houses I have called at have good American and Canadian connections, and speak highly of the relations that exist between the countries.

One of my earliest visits was paid to the showrooms of Messrs. Lynch & Co. (Limited), of Aldersgate Street, E.C., where the

Lynchgate Sundries

are increasing. The antiseptic hygienic toothbrush, which we have described before, is selling well, and the sale is helped by means of the nickel showstand with glass cover which is given free with gross lots. There are some pretty new designs in sponge-bags and bathing goods to be seen there, and several quaint toilet-sets in opal, enamelled in colours, gilt round the edges, and with picture-tops. Audesol moth-paper (one dozen cards in a box for 6*d*.) is seasonable, and likely to be saleable, and a decorated tin puff-box, containing ¼ lb. of powder and a puff—all for 6*d*.—is surely cheap enough for the million. The Lynchgate soothers are large in size and numerous in variety, and only English rubber is used. A new sixpenny line of lavender-water, Florida-water, and eau-de-Cologne has lately been evolved. In the instrument-room Mr. Winter showed me an auto-rotary hand-fan, which may prove antidotal to the coming heat-wave. It is constructed on the principle of the ship's screw, and may be used for all the purposes of an ordinary fan, besides being capable, it is said, of doing everything that a battery fan can do. He also demonstrated the mechanism of the Bullard magazine-camera, which is made on the lines of the Winchester repeating-rifle. The camera is charged with eighteen plates, and when a photograph is taken a catch is let go which releases a fresh plate from below, and by simply pulling back a handle the used plate is carried on to the top and a new plate left in position without any part of the internal economy of the instrument being exposed. In this department also a pretty little velvet-lined counter-showcase for clinical thermometers was seen, the virtues of the Loewy truss explained, the Lynchgate douche criticised, and a neat Britannia-metal spitting-flask (illustrated above) admired.



Apenta and Apollinaris.

In the course of a chat with the manager of the Apollinaris Company (Limited), at 4 Stratford Place, Oxford Street, W., the other day, a few details of the success of the company's products in the United States were vouchsafed me. The Apollinaris Company has an agent in New York, and travellers from that centre work the whole of the States. The American business is a very large one, and is ever increasing, "Polly Cock-tail" being evidently as popular there as "Polly and Whisky" is here. With Apenta a like brilliant future is in store, but the country has not yet been so thoroughly canvassed perhaps as Great Britain. For one thing it is bigger, and for another there are many fancy drinks in that thirsty land which the natives affect, and whose deleterious effects might be mitigated were the virtues of Apenta and Apollinaris more widely known. But the complaisance with which the company's representative admitted that "they had no reason to grumble at want of orders either from home or abroad" satisfied me that no gloomy forebodings overlooked the future of these household thirst-quenchers.

Business at Barclay's.

"Why was Charing Cross?"

"Don't know."

"Because the Strand ran into it, of course."

Such was my greeting at 95 Farringdon Street, E.C., a day or two ago from Mr. Gray the irrepressible. "Exceptionally busy," said Mr. Gray, in answer to my query, "both with home and export orders." The firm have a very good Canadian connection, and I heard of a respectable consignment for Pretoria which has recently been despatched. Orders from the country are difficult to keep pace with, and the outlook for summer trade is bright. And novelties are not a-wanting. The parolein and light-oil atomiser, by a simple adjustment, can be made to spray up the nose, down the throat, into the eye—or into your neighbour's eye—as the operator pleases. The celluloid medicine-tumbler is impervious not only to chemicals, but also to rough usage. "When not in use it may be employed for playing ping-pong with," Mr. Gray put it. A mammoth menthol cone may be had for 4*d*. which any pharmacist can doubtless get 1*s*. for, and real wire-drawn (I saw the section and the wires) toothbrushes are to be had for 2*s*. per doz. Two new Bourjois perfumes, "Ideal Carnation" and "Prima Violeta," are sweet and soothing. Other bargains include a two-ball bellows gilt-mounted spray (12*s*. per doz.) and a bone-back nail-brush (six-row) which costs only 3*s*. 9*d*. per doz.

By the Charterhouse.

The migrations which the exigencies of increasing business have forced upon Messrs. F. Newbery & Sons have caused the creation of a series of specialities now well known to the pharmaceutical fraternity. St. Paul's Churchyard, the original home of this old-established firm, induced "St. Paul's" perfumes; Newgate Street brought the "Newgate" fly-catcher into being; and Charterhouse Square has already given birth to "Charterhouse Marking-ink," "Charterhouse Flavouring-essences," and so on. But an inspection of the showroom reveals many other new things yet to be known to the trade. Amongst these I feel sure the pretty puffboxes with aluminium or electro-plated lids will not long remain unrecognised, nor will the cheap but generous-looking lines of sixpenny smelling-bottles. St. Paul's perfumed water-softener is still selling freely along the South Coast, and ladies with delicate skins who have to struggle with "hard" water may for a sixpence or a shilling find solace for their complexions. For the male person, razors, razor-strops, shaving-material (a shaving-mug with a razor-shaped handle seemed new) are provided; while baby combs on fetching heart-shaped display-cards gladden the maternal (or paternal) eye. The duplex cloth-and-hat brush and the inevitable hygienic toothbrush (called the "Sanitary") are likewise noted as we pass on to a contemplation of the large sponge stock. By the way, sponge is to be dearer this season, I am told—the sixpenny sponge will not be so large as that of former years. "Niagara Fruit salt," in decorated tins, for the internal portion of the anatomy, and Quentin's toilet-wafers (now reduced to sixpence per packet) for the exterior, are on view. Peterman's "Cockroach and Beetle Food" and "Rat and Mice Food" are not animal nutrients, but exterminators. Messrs. Newbery's well-established American agencies are known My guide reported a continued increase in the sale of Warner's packed proprietaries, such as liver-pills, bronchial tablets, neuralgia-pills, complexion-pills, &c.—all of which, when bought in three-dozen lots, are printed with customer's own name and address.

Sanger's Specialities.

Reports of brisk business are in order at 2 Winsley Street, Oxford Street, W., where the representative of Messrs. J. Sanger & Sons showed me his firm's latest novelties. Photographic sundries are an increasing adjunct to this business, and the latest development is the supply of ready-made 2*d*. developers packed in cartons. In the twopenny form pyro, hydroquinone, hydroquinone and metol, and one-solution

developers are put up under the name of the "Wallsgrove" developers, while the shilling size of fixing and toning solutions are known as the "Aristos" series. Photographic requisites of all sorts are held in stock, and much is expected from this side-line as photography is increasing in popularity, and is by no means an ephemeral craze. The other particularly noteworthy features of the showroom were a striking line of toilet and tooth-paste specialities in collapsible tubes, a fine show of cut-glass perfume and toilet bottles, and a large display of flesh-gloves, flesh-straps, sponge-bags, and bathing-caps. The latest bathing-cap is a wonderfully faithful reproduction in rubber of Malplaquet marble.

Business Novelties.

ROBINSON'S CONCENTRATED WATERS.

These well-known and useful products from the laboratories of Mr. Benjamin Robinson, pharmaceutical chemist, Pendleton, Manchester, scarcely come within the category of "novelties," but this at least is novel in respect to them—viz., that the manufacturer has now arranged for a spirit-drawback upon them on exportation. This to colonial and foreign buyers means an extra allowance of 10 per cent. in addition to the usual discount.

ADVERTISING THE "SALT OF SALTS."

Abbey's Effervescent Salt has made steady headway in public favour, and the manufacturers appear to be determined to maintain and extend the advantage they have gained. This week they offer to send any of our subscribers handsome showcards and other useful advertising matter. They are also arranging special window-displays and sampling, as to all of which application should be made to the Abbey Effervescent-salt Company (Limited), 144 Queen Victoria Street, London, E.C.

SODA-FOUNTAINS AND SYPHON-MACHINES.

Mr. Charles Best, of Grosvenor Buildings, Steelhouse Lane, Birmingham, is issuing an attractive illustrated catalogue and price-list of soda-water fountains of various designs and shapes. The illustrations give a good idea of the appearance of the firm's fountains, and full information is afforded concerning construction, material, size, and decoration, as well as prices. The "Charles Best" syphon-filling machine is another speciality of the firm, its chief features being simplicity of construction and the rapidity with which syphons can be filled and syruped by its means. It can be easily worked by a boy or girl, and is fitted with strong perforated guard.

MOTH MORT.

Ere long the ubiquitous moth will be seeking out pleasant places in which to deposit its ova, so the Crown Perfumery Company, 112 and 113 Fore Street, E.C., have come forward in the nick of time with a striking novelty in the shape of Crown Moth Mort. This is a sachet of agreeable odour to retail at 6*d.*—no cutting and P.A.T.A. protection. It is put up in a handsome envelope of original design, tied with rainbow ribbon, the cross tie being about an inch from the right-hand side of the envelope. A 2-dozen boxful of Moth Mort makes an oasis on the counter or showcase, and the company are supplying with the article a large moth cut out of cardboard, which is placed upon an easel, and conveys a message to the public on Kodak lines. We understand that Moth Mort has already taken well, 3,000 dozen having been sold in ten days. We may note that during the three weeks from May 27 to June 15 the Crown Perfumery Company make a special offer of 5 per cent. bonus on all orders sent to them of over 2*l.* The orders may be assorted, and the company pay carriage on the goods.

NEW PRICE-LISTS.

A New Price-list for patent medicines and sundries has been issued by Messrs. Raimes & Co., of York. The list is a complete and comprehensive one, and an interesting six pages at the end details the everyday specialities and sundries which this well-known northern drug-house are prepared to supply.

Messrs Lorimer & Co. (Limited), Britannia Row, Islington, N., and 254 George Street, Sydney, N.S.W., have just published new catalogues. One of these is entirely devoted to chemists' "own name" specialities. The list extends to 52 pages, and embraces a large variety of medicinal and other preparations, hundreds of engravings being used to illustrate the styles of packing. The illustrations are faithful representations of the original articles except in regard to colours and gilt, and are almost as good as samples to buy from. The second catalogue of the company's prices current for May, 1901, consists of 42 pages and the cover, the latter containing much useful information, such as alcohol-tables and the metric system of weights and measures. Nearly half of the list is devoted to chemicals, drugs, and galenical preparations, and the rest to lists of soluble essences, capsules, coated pills, compressed tablets, lozenges, granular preparations, veterinary medicines, concentrated mixtures, and packed medicines. Both of the lists, with loop-ribbon for hanging, can be obtained by any subscriber on application to the firm at the London address.

TELL-TALE SYRUP.

The Top Not Company, of Glasgow, have just introduced a new medicinal compound under the name of "Tell-Tale Syrup of Bananas," and they are making to chemists special offers to facilitate its introduction to the public. The syrup is a neatly-put-up preparation, which retails at 1*s.*, and is a tonic-laxative for children and adults. It is well compounded, has a good appearance and a pleasant flavour, being practically free from medicinal taste. Of its medicinal merits we are not prepared to speak, but have no reason to question the efficacy of the syrup. The present public interest in the banana-trade of the West Indies makes the introduction of the banana-syrup effective, and the showcards which the company are giving to retailers bear a natural and artistic reproduction of a fine bunch of the West Indian fruit. The company offer prizes for window-displays as follows:—First prize, 50*l.*; second, 10*l.*; third, 5*l.*; and fifty of 2*l.* each for the best-dressed windows. Judges and a referee have been appointed, and it may be noted that the competition is open to every retailer who buys two gross of the syrup. The display has to last for three weeks, and in every case the company will pay 2*l.* for the use of the window during that period, besides supplying complete material for display and sample bottles for free distribution. Judging from the large photograph of a display that has been sent to us, there is an opportunity of good business by entering the competition, full particulars of which may be obtained on application to the company. The explanation of "tell-tale" is that a furred tongue tells its own tale—"take a dose of the syrup."

NOTES.

We observe that Liebig's Extract of Meat Company (Limited) are offering a series of "Lemco" cookery prizes, consisting of Beeton's 7*s.* 6*d.* "Household Management" and other books, which are to be given away next November for collections of Lemco wrappers.

Apomorphine, when injected subcutaneously, has a most depressing influence, and to counteract this Messrs. Burroughs Wellcome & Co. combine together in tabloid form $\frac{1}{10}$ gr. hydrochloride and $\frac{1}{60}$ gr. strychnine hydrochloride. These are put up in tiny tubes of a dozen, so that a dose may

be dissolved extemporaneously, as apomorphine solutions do not keep. The compound dissolves quite easily in half a syringeful of water.

MESSRS. STILES & SON, Gray's Inn Road, W.C., London agents of the John Matthews Apparatus Company, New York, have just fitted up an elegant American soda-water fountain in the pharmacy of Mr. F. Whittaker, chemist and druggist, 285 Oxford Road, Manchester. This is a novelty in Manchester, as it is the first to be introduced into the business of a chemist in that city.

PHOSFERINE, Messrs. Ashton & Parson's well-known speciality, is the subject of a commendatory article in *Science Siftings* of this week. Our contemporary says:—"We have observed that great care is bestowed on its compounding in order to secure constancy of results. We have carefully investigated its composition, and find that it is of exceptionable medical value where it is necessary to remedy the defective circulation of the blood from which nervous debility and complaints so frequently arise."

MESSRS. WIDENMANN, BROICHER & Co., 33 Lime Street, E.C., write respecting a note in last week's issue:—"Dr. Weiss, of Bale, was the first to draw (recently) the attention of the profession to the efficiency of quinic acid in uric-acid diathesis. He induced Messrs. Zimmer & Co., of Frankfort-on-Main, to prepare a quinate of lithia, which was called 'Urosine,' and patented in all countries. Sidonal was put on the market later on, and its manufacture may have been suggested by the success of Zimmer's urosine. The price of urosine is, however, so much less than that of sidonal that competition appears out of the question."

MR. BRENT GOOD, President of the Carter Medicine Company, who is now in London on business in connection with the firm, informs us that a small quantity of Carter's Little Liver-pills have been smuggled into Liverpool from America by irresponsible persons without the Inland Revenue stamp being attached to the bottles. Information has been lodged with the Board of Inland Revenue, with the result that one of the firms implicated has paid the penalty for infraction of the Medicine-stamp Acts. We have been requested to give publicity to this fact as a friendly warning to the trade Those buying Carter's Little Liver-pills should be sure that they bear blue-and-white labels. The Inland Revenue stamp is round the bottle, but cannot be seen until the outside wrapper is removed; so retailers must rely upon the labels and the reputation of the houses they deal with.

Business Changes.

BOOTS (LIMITED) have opened a new branch pharmacy at 23 Russell Street, Stroud.

MR. T. J. WILKES, chemist and druggist, has opened a pharmacy at Institute Road, Swanage.

MR. A. J. T. LONG, pharmaceutical chemist, Guildford, has opened a pharmacy at Byfleet, Surrey.

MR. J. N. BEARDSALL, of Brandon, has opened in business at 207 Wellingborough Road, Northampton.

MR. G. W. HARRISON, chemist and druggist, 22 Cross Street, has removed to 118 Broad Street, Reading.

MR. HEDLEY COE, chemist and druggist, has bought the business of Mr. H. I. Masters, at 5 Cheap Street, Bath.

THE Foster-McClellan Company's new address is 8 Wells Street, Oxford Street, W., not Berners Street, as stated last week.

MR. E. W. HILL, pharmaceutical chemist, has succeeded to the business of Mr. W. H. Cole, at Redcliffe Street, Bristol.

MR. J. J. BURNBY, chemist and druggist, of Great Yarmouth, has purchased the business lately carried on by Mr., W. Neal, 335 White Horse Road, Croydon.

MESSRS. CAVE, AUSTIN & Co. (LIMITED), Catford, announce that their establishment is now under the management of Mr. G. F. Snow, chemist and druggist.

MESSRS. DAVIES & SHEPHEARD, chemists, Bridge Street Row, Chester, have taken over the business formerly carried on by the late Mr. J. H. Spencer, chemist, 36 Bridge Street, Chester.

MR. JAMES WALKER, chemist and druggist, of 72 Ledsam Street, Birmingham, has purchased the business of Mr. W. T. Jones, pharmaceutical chemist, in the Parade, Sutton Coldfield.

MESSRS BAILLIÈRE, TINDALL & COX, whose premises in King William Street are being used for the extension of Charing Cross Hospital, have removed to 8 Henrietta Street, Strand, W.C.

THE Carlisle Circus Apothecaries Hall, Belfast, has been purchased by Mr. J. W. W. Agnew, M.P.S.I., Clifton Street Medical Hall, Belfast, from the liquidator of the Ulster Chemists, Limited. The business was formerly owned by Mr. R. W. McKnight, in succession to the late Mr. James G. Gosker, who for many years carried on an extensive business.

MR. MARSHALL HEANLEY, pharmaceutical chemist, who for many years has carried on business in the Market Place, Peterborough (the firm up to recent years being known as Heanley & Saunders), has retired, the pharmaceutical branch of the business having been acquired by Mr. R. W. Wilson, pharmaceutical chemist, of Long Causeway, Peterborough, who has purchased the books, stock, and goodwill. The premises so long occupied by Mr. Heanley are about to be demolished. Mr. Heanley will still carry on his mineral-water business in Park Road.

Personalities.

MR. S. JESSOP, chemist and druggist, has been elected a member of Nelson Town Council.

MR. P. J. ASHFIELD, chemist and druggist, has been elected a vice-president of the Rhyl Advertising and Improvement Association.

MR. ERNEST AHIER, chemist and druggist, writes to say he has no further interest in the business at 1 Church Street, Lisson Grove, N.W., having severed his connection therewith.

PROFESSOR WYNDHAM R. DUNSTAN'S latest title is the "Imperial Magician." The *Daily Express* so calls him, and devotes half a column to the work of the scientific department of the Imperial Institute.

THE many friends of Mr. R. W. McKnight, L.P.S.I., formerly owner of Carlisle Circus Apothecaries Hall, will be glad to know that he has received an important appointment at Dublin in one of the leading wholesale drug-houses.

MR. THOMAS FARNSWORTH, pharmaceutical chemist, Codnor, Derbyshire, has been presented with a silver candelabra and illuminated address on the occasion of his resignation as postmaster after more than forty years' service.

MR. JOHN JACKSON WILSON, chemist and druggist, Egremont, has been elected Chairman of the Urban District Council. Mr. Wilson has been in business at Egremont since 1870, and has been a member of the local governing body since 1880.

COUNCILLOR WM. ASPINALL, chemist and druggist, Ashton-in-Makerfield, and analyst to the Abram Urban District Council, has been appointed to represent the Council at the Royal Institute of Public Health Congress, to be held at Eastbourne in July next.

MR. WILLIAM FRENCH, M.A. (Cantab), F.I.C., F.C.S., senior science-master of the Bury Grammar School, and of the Bury and Ramsbottom Technical Schools, was on Tuesday appointed Principal of the Storey Institute and Municipal Technical School, Lancaster.

MAJOR GIBSON, Lieutenant Gibson and Mr. T. E. Riddle, all chemists of Hexham, are members of the Reception Committee on the occasion of the home-coming of the local Volunteers from South Africa, amongst whom will be another chemist, Mr. J. T. Hogarth.

MR. SIDNEY GOSS, of the Crown Perfumery Company, Fore Street, E.C., informs us that in consequence of a number

of requests from assistants who wish to get his forthcoming book "£ s. d.," but cannot afford to pay down 5*l.* in a lump he has decided to set aside twenty copies of it for sale to them on the instalment plan, 15*s.* 6*d.* being paid with the order, and 10*s.* 6*d.* in each of the nine months following.

Mr. W. Griffith, chemist and druggist, of Northampton, whose musical productions we have referred to on former occasions, has sent us a copy of an anthem "It shall come to pass," which he has composed. Our musical critic reports that the work is both pretty and tuneful, and one or two passages in the quartette, "God is a spirit," which forms the greater part of the piece, possess more than ordinary merit. The publishers are Messrs. Handel & Co., 193 Oxford Street, W.

Mr. Richard Fox Smith, chemist and druggist, Barton-on-Humber, was the subject of a sketch given in a Hull newspaper last week. Mr. Smith is described as being one of the best-known men in North Lincolnshire. At the age of 14 he was apprenticed to Messrs. Tomlinson & Crowder, chemists and druggists, Hull, and after serving as an assistant at Nottingham, Newark, and Hull, he took over the business of Mr. John Green, at 35 High Street, Barton, when but 22 years old, and there he has remained ever since.

Mr. Fred Ingram, chemist and druggist, Johannesburg, arrived at Southampton last Saturday from South Africa for a six months' holiday, and we have had a call from him and Mrs. Ingram, who has been home for a year. Mr. Ingram has been at business in Johannesburg right through the war, and he has many interesting things to tell in regard to the exceptional experience of traders there. When he left Johannesburg about six weeks ago business was fairly good, and the prices that chemists obtained were high owing to the scarcity of stock. For example, Beecham's pills were selling at 2*s.* for 1*s.* 1½*d.* boxes, Cuticura soap at 6*s.* for three tablets, Premier Vinolia soap 2*s.* a box, and 1*s.* toothbrushes were selling at 2*s.* The demand for toilet articles has much increased since the British occupation of the city. During the war Mr. Ingram had as much dispensing to do as usual. He had a touch of coast-fever before he left the Cape, but is recovering now.

Bankruptcies and Failures.

Re William Leech, 111 High Street, Waltham Cross, Hertfordshire, Chemist.

The following are creditors:—

	£	*s*	*d.*
Battley & Watts, London	17	8	7
Bayley, S., Waltham Cross	65	0	0
Maw, S., Son & Sons, London	17	3	0

Re John Hutchinson Wood, 72, Handcroft Road, Croydon, Chemist.—Amongst the creditors are: — Bailey, Croydon, 10*l.*; W. R. Dixon, West Croydon, 98*l.*; Evans, Lescher & Webb, London, 14*l.*; J. Hutley, West Croydon, 56*l.* 10*s.* 6*d.*

Gazette.

The Bankruptcy Acts 1883 and 1890.

Receiving Order.

Staines, John Francis, Bloomsbury Square, W.C., surgeon

Adjudications.

Kent, Arthur Edwin, Ramsbottom, chemist.

Taylor, Frederick (late carrying on business under the style of A. Taylor), Earlestown, late Castleton, Lancashire, druggist.

Partnerships Dissolved.

Blythman, C. S., and **Fullarton, J.,** general medical practitioners, Swinton.

Dixon, J. D., and **Alderson, W. E.,** medical practitioners, Newcastle-upon-Tyne, under the style of Dixon & Alderson.

Featherstone, J., and **Hall, M.,** general medical practitioners, Fallowfield, and Withington, Lancashire, under the style of Featherstone & Hall.

Finch, C. W., and **Finch, W.,** mustard manufacturers, &c., Staines, and Broken Wharf, Upper Thames Street, E.C., under the style of Finch, Rickman & Co.

Mason, P. B., and **Bridgman, H. E.,** Burton-on-Trent, physicians, &c., under the style of Mason & Bridgman.

Birth.

Hunter.—At 15 Carlton Place, Aberdeen, on May 13, the wife of Mr. Robert Hunter, chemist, of a son.

Deaths.

Boyle.—On May 9, at 11 Granville Place, Portman Square W., Sir Courtenay Edmund Boyle, K.C.B. Aged 56. The deceased gentleman was not educated with a view to commercial pursuits, although he was practically the head of the British Commercial Department as Secretary to the Board of Trade. At Oxford he was a great cricketer, and as a student there Lord Spencer, noticing his promise, appointed him his official Private Secretary in 1868, when he began to act as Viceroy of Ireland. After five years in that office, and on the defeat of the Liberal Government of the day, Mr Boyle was appointed Local Government inspector for the eastern counties. He returned with Lord Spencer to Ireland in 1882, and in 1886 was appointed Assistant Secretary in the Railway Department of the Board of Trade. In 1892 he was made a K.C.B. and the following year was appointed Permanent Secretary to the Board of Trade. He was a clever man, especially with the pen, and took something more than an academic interest in commercial affairs, more particularly in commercial education.

Broadhead.—On May 19, after a long and painful illness, Annie, the beloved wife of Mr. Richard Broadhead, chemist and druggist, Batley.

Caithness.—At Woodlands, Denbigh, on May 10, James Caithness, M.D. The deceased gentleman fully forty years ago served his apprenticeship to the drug-trade with the late Mr. James Hamilton, Dundee, and thereafter went to Lochgilphead, where he successfully carried on business as a chemist and druggist. He disposed of his pharmacy in order to study medicine at the Glasgow University, and there graduated as M.D., C.M., in 1872. Not long after he commenced practice in Denbigh, and became a popular physician He was Coroner of the town.

Healy.—On May 21, at his residence, West Street, Drogheda, Mr. Luke J. Healy, chemist, last surviving son of the late James Healy. The funeral took place on May 23 at the New Cemetery.

Long.—At Reading, on May 10, Mr. Henry Long, pharmaceutical chemist. Aged 66. Mr. Long was formerly in business at Notting Hill, and was the founder and first president of the Western Chemists' Association. He used to speak at the annual meetings of the Pharmaceutical Society, and his rising was always the signal that the proceedings were to diverge from the prosaic official order, for he supplied his fellow-members with many a good laugh, and in humorous style he supplied many a pertinent criticism. A charming man and a good pharmacist, he was thoroughly sincere in respect for his calling.

Ogle.—On May 14, Mr. John Henry Ogle, pharmaceutical chemist, Tunbridge Wells.

Rodman.—At 8 Maxwell Road (Eglinton Toll), Glasgow, on May 15, Mr. John Rodman (of Messrs. J. & R. Rodman, chemists, Duke Street, Glasgow). Aged 53.

Suttar.—At 5 Leamington Road, suddenly, on May 17, Mr. John Suttar, chemist and druggist. Aged 43. Mr. Suttar, after passing the Minor examination, was appointed assistant-dispenser at the Edinburgh Royal Infirmary. Subsequently he came to London, and held for several years the dispensership to the Bethnal Green Board of Guardians, from which he retired about two years ago owing to heart-trouble.

Woolrich.—At Uttoxeter, on May 8, Mr. Charles Bromley Woolrich, chemist and druggist. Aged 71.

Legal Reports.

Trade Law.

Fire-escapes under the Factory and Workshops Acts.—The L.C.C. served a notice requiring a certain staircase to be erected as a fire-escape. The order was not complied with. The defendant, before the Magistrate, brought evidence that the staircase could not be constructed without interfering with the ground-floor premises, occupied by a third party. The Magistrate decided that the construction of the staircase would constitute a trespass and encroachment on the separate factory, and dismissed the summons. The High Court has upheld the Magistrate's decision.—(L.C.C. *v.* Brass, K.B.D., May 14.)

False Gas-meters.—The Rotherhithe Baths and Washhouses gas-meter registered inaccurately from 1881 to 1900, and only a tenth of the gas consumed was charged until the error was found out recently. The Gas Company claimed 884*l.*, the balance for gas supplied between 1894 and 1900, the debt for the period before 1894 being barred by the Statute of Limitations. The case came before the King's Bench Division of the High Court, when the defendants argued that the quarterly accounts had been paid in full satisfaction of all claims; but this the Court overruled.—(South Metropolitan Gas Company *v.* Mayor, &c., of Bermondsey, K.B.D., May 17.)

Flashlight Advertisements.—The police summoned the manager of a firm of tobacconists in Pentonville Road for "unlawfully exhibiting a flashlight so as to be visible from Pentonville Road and to cause danger to the traffic, contrary to the L.C.C. by-law." The advertisement was a block of letters 2 feet high, placed 10 feet above the footway, the shop-front being 16 feet from the roadway. Each letter flashed in turn until all were illuminated, and then the light suddenly went out. The prosecution said it was dangerous because so near the roadway, and horses had been frightened by it. The defence denied the danger; but the Magistrate imposed a fine of 40*s.*—(Clerkenwell Police Court, May 11 and 18.)

Personal Injuries from Improper Loading of Goods.—A box fell from a L. & S. W. R. van and injured Lady Vine, who was passing. She sued the railway company for damages. In court it was proved that Mr. Kent supplied horses and drivers for the L. & S. W. R. Co.'s vans; but in this case the van also belonged to Kent. The company said they were not liable, as negligence, if any, was on the part of Kent's servants. It was their duty to bring the goods up to the van, the packing and securing being done by Kent's men. Kent said he had lent horses, van, and driver, to the railway company, and that they were under the direction and control of the company. In evidence, he stated that the carman was responsible for the proper loading, and that in this case his carman had reported that the company's servant had assisted in the loading. The jury found that the railway company were responsible.—(Vine *v.* L. & S. W. R. and Another, K.B.D., May 14.)

Inhabited House-duty on Shops.—Maple & Co. (Limited) have several blocks of shops, each block having its own party wall, and communicating with the other blocks by double iron doors, opened during the day but closed at night. Part of two blocks were used as living-rooms by the assistants. The blocks had been assessed at 11,069*l.* for inhabited house-duty, and Messrs. Maple appealed, contending that the assessments to inhabited house-duty should be limited to those parts of the premises which were used for residential purposes, there being no communication within the meaning of Rule 3, Schedule B, 48 Geo. III., c. 55, and that, at any rate, the assessments should be limited to the two blocks, part of which were used for residential purposes. The case has been argued in the High Court, and Mr. Justice Kennedy decided that the business portion of the premises communicated with the residential portion, and the fact that at night the means of communication were closed was immaterial. The whole of the premises were therefore assessable under Rule 3. Mr. Justice Phillimore concurred.—(Maple & Co., Limited *v.* Wilson, K.B.D., May 15.)

High Court Cases.

Electrolytic Alkali.

In the Chancery Division on Thursday, May 16, Mr. Justice Buckley gave judgment in the case of Atkins and Applegarth *v.* the Castner-Kellner Alkali Company, in which plaintiffs claimed an injunction restraining the defendants, their servants and agents from infringing the plaintiffs' patent for an improved apparatus for separating alkaline and earthy metals and other products from the salts of such metals and other substances. His Lordship said the question he had to determine was whether the letters-patent were valid, and secondly, if they were valid, whether the defendants had infringed them. The question of validity subdivided itself into questions of anticipation and utility. The process with which he had to deal was one in which a solution of sodium chloride, or common salt in water, was submitted to an electric current whilst in contact with mercury, with the result that the sodium in the solution was precipitated into the mercury, whilst the chlorine was driven off as gas. The defendants pleaded anticipation, and that at the date of the patent there were three known processes on which the defendants relied set out in the specifications of Volf, Petri, and Donkin. The plaintiffs, in the light of the knowledge which existed at the date the patent was obtained, said that heretofore it had not been found possible—that was, industrially or commercially possible—to apply the electrolytic process for the purpose of separating metals from their salts. The plaintiffs stated the reasons why that had been found impossible, but he was satisfied that the reasons set forward were erroneous. But the fact that a patentee had misconceived a theory did not invalidate a patent if the patent could be supported in other respects. The patentees' object was to provide means and apparatus for obtaining results on a practical scale, and without requiring so great an amount of power as would be required by the use of ordinary electrolytic apparatus. The special points were a practical scheme and economy, and if the apparatus did not achieve those two results, the patent failed. The conclusion he drew was that the patentees did not know, and left the public to find out, that speed in the flow of the mercury whilst exposed to electrolytic action was advantageous or injurious. The claim was, in his opinion, one for a process by which the patentee asserted that they would on a practical scale and with greater economy obtain the desired metals from flowing mercury as employed as a surface for the cathode, but he did not find that the patentee described the rate of discharge of the flowing mercury from the electrolytic cell, which was necessary to success, either by indicating the speed at which it was to be caused to flow or by indicating at what point of richness the amalgam was to be made to leave the cell. Personally, he failed to find in the process which the plaintiffs claimed any new invention which was not found in processes previously described. Passing next to the question of utility—not necessarily commercial utility or competitive utility, but utility for the purposes of the patent-law—he came to the conclusion that the plaintiffs had not established that the invention was useful. On the question of infringement the defendants had done what the plaintiffs claimed to have done, but not by means of anything they had taken of the plaintiffs' process. On all points he thought the plaintiffs failed, and the action would be dismissed, with costs.

Enforcing an Agreement.

In the Chancery Division of the High Court of Justice on May 17, Mr. Justice Cozens-Hardy, in the case of Boake, Roberts & Co. *v.* Sibley, had before him a motion to restrain the defendant from entering into the service of or being employed by any person or firm as a chemical manager or servant within 200 miles of London, such person or firm manufacturing articles similar to those of the plaintiffs. Mr. Eve, K.C., explained that this was the essential part of an agreement between the parties when the defendant was assistant works-manager to plaintiffs. He had retired from their employment in April, 1900, and was now employed by the Union Alkali Company, of Manchester, who make similar articles to the plaintiffs. Mr. Earle, for the defendant, contended that the covenant was wider than was reasonable, and that it was void on the ground of public policy, and that there had been undue influence used by the plaintiffs in getting the defendant to sign the document. Mr. Justice Cozens-Hardy, in granting an injunction until the trial, said the agreement was perfectly reasonable, and there was nothing amounting to a shadow of undue influence in obtaining it.

Anthrax in Linseed Cake.

Mr. Justice Mathew and a Special Jury heard evidence on May 18 in an action brought by Lord Brougham against Messrs. Pattinson & Winter, Merchants, of Penrith, for supplying him with linseed cake and square feed cake

alleged to be contaminated with anthrax bacilli. The evidence showed that during last year cattle to the value of 225*l.* died at one of the plaintiff's farms. Death was due to anthrax, and it was alleged that anthrax bacilli existed in the cattle food, Professor McFadyean giving evidence to this effect, and Professor Delepine corroborating. On the contrary, Professor Boyce, of Liverpool, Professor Sims Woodhead, of Cambridge, Dr. Klein, Professor Muir, of Glasgow, and Professor Penderthy on behalf of the defendants testified that the bacillary contamination was more likely to have arisen from a case of anthrax which occurred at one of the plaintiff's farms in 1891, and that the contamination was caused by the handling of the cake by plaintiff's servants. These witnesses said that the spores of anthrax live for many years, and they felt confident that the process of treatment of the linseed in the course of making the cake would destroy any bacilli, should such be present in it. The decision was given on May 21, when the jury found a verdict for the plaintiff with damages, 304*l.* 13*s.* 6*d.*

Gibson *v.* Bovril (Limited).

In the Court of Appeal on May 21, before Lords Justices Collins and Stirling, the case of Gibson *v.* Bovril (Limited) was heard on appeal by the plaintiff from an order of Mr. Justice Day, who had refused an application by him for a further and better affidavit of documents. Mr. Herbert Reed, K.C., appeared for the appellant, who was engaged as private secretary to Mr. Lawson Johnson. He entered into an agreement with the company by which Bovril (Limited) undertook to pay him a percentage upon the net profits of the business, and the agreement further provided that the employment was to be terminated by a three months' notice. The plaintiff had been dismissed after notice upon the death of Mr. Lawson Johnson, and he had now instituted proceedings against the company claiming damages and other relief, he setting up a verbal agreement between himself and Mr. Lawson Johnson, which, he alleged, provided that he was to become managing director of the company, and that he was not to be subject to the three months' notice of dismissal His contention was that his employment was to be permanent, subject to his giving his best attention to the business of the company. Part of the plaintiff's case was that the company had misrepresented the profits which had been made by the company during the year preceding the date of the agreement, and he desired to have inspection of books and documents which would enable him to ascertain how the profit-and-loss account had been made up. Mr. Justice Day had refused to grant that inspection.

Lord Justice Collins saw no reason for interfering with the discretion of the learned Judge, and dismissed the appeal.

Lord Justice Stirling concurred.

The Vaseline Trade-mark.

In the Court of Appeal on Wednesday May 22, before Lords Justices Collins and Stirling, Mr. Astbury, K.C., applied on behalf of the Chesebrough Manufacturing Company for leave to adduce further evidence at the hearing of the appeal from the judgment of Mr. Justice Buckley, who had struck off the register the trade-mark "Vaseline" consequent upon the recent "Vasogene" case. The plaintiffs now asked leave to adduce at the hearing further evidence which since the trial had come into their possession. Their Lordships, without going into the merits of the case, directed the application to come on with the appeal.

Excise Acts.

Medicine or Refreshment?

At Newcastle on May 4, George Kingdon was charged with keeping a refreshment-house without a licence. A police-sergeant deposed to seeing various persons in the shop supplied with drinks to be consumed on the premises. At ten minutes after midnight he entered the place and asked for a bottle of botanic beer, half of which he drank and for which he paid 1*d.* There were notices in the windows to the effect that tonics were sold, but he did not see a notice up which read, "Sarsaparilla, the great blood-purifier." For the defence it was contended that the house was not a refreshment-house within the meaning of the Act. Defendant was a medical herbalist, and sold everything that a chemist did except the scheduled poisons. The Clerk said the point was whether the callers wanted drink or physic; and the Bench ultimately decided that the house was a place of refreshment, and inflicted a fine of 10*s.* and costs.

Sale of Food and Drugs Acts.

Analysts Differ.

At the Hartlepool Petty Sessions on May 21, the case in which R. C. Black & Sons were charged with selling margarine which was alleged to contain 35 per cent. of butter-fat again came up. The Somerset House report stated that the sample submitted to them did not contain more than 10 per cent. of the fat, which was the unit legally allowed; the borough analyst's certificate showed 35 per cent.; and the defendants' expert-evidence stated that there was no butter-fat in the sample at all. It was urged that there had not been a proper analysis made by the local analyst, and the case was dismissed, with costs against the prosecuting authorities.

County Court Cases.

Damages against the Viavi Company.

At the Manchester County Court on May 17, Clara Louisa Wright, formerly in the service of a firm of drapers in Manchester, sued the British Viavi Company for damages for breach of contract in failing to cure her of a tumour near the os uteri. Plaintiff had been ailing, and had consulted two doctors; then she went to one of the Viavi lectures given by a Mrs. Dobson, who afterwards induced her to try the Viavi remedies, saying, it was alleged, that she might be cured in six weeks, but at any rate in three months. She was supplied with pills, capsules, cerates, &c, and followed the instructions carefully for six months. During that time Mrs. Dobson came to see her four or five times, and told her what to do, and what sort of treatment to apply. She also received a large number of letters from the Viavi Company, among which was one which stated that medical men were using Viavi remedies in their private practice. Mrs Dobson also told her that an operation would only give her relief for a time. In December, being then in Birmingham, plaintiff consulted Dr. Martin, who on the 29th removed the tumour, and in fourteen days she was quite well. She had had no trouble since. Before going to Dr. Martin she had got worse and worse. She had spent 8*l.* 4*s.* in Viavi remedies. She still owed the firm 1*l.* 16*s.*, which was the subject of a counter-claim. Mr. D'Arcy, for the defendant company, cross-examined the plaintiff, who remarked that Mrs. Dobson had said that Viavi is composed of thirty-two ingredients from the vegetable kingdom, grown in California, which are kept in a vat for six months so as to develop their qualities. A Mrs. E. Schliffes testified to hearing Mrs. Dobson tell the plaintiff that Viavi would cure her. Dr. Martin, Birmingham, gave evidence as to the operation he had performed on the plaintiff. In his opinion the Viavi capsules would do no good, and their insertion might have led to the introduction of germs. He did not think the Viavi ointment would do any good or any harm, but it would be a waste of money. The pills he took to a leading firm of analytical chemists, and had them analysed. He had seen a copy of the analysis of Viavi medicine by Mr. Carter Bell, of Manchester, in the *British Medical Journal*. It had also been published in The Chemist and Druggist. Copies of both journals were produced in court. Mr. Acton, for the plaintiff, read a portion of the analysis from The Chemist and Druggist. After other evidence in corroboration, Mr. D'Arcy, for the Viavi Company, said the head offices were in London. They were a British limited-liability company, and claimed the privilege of pushing their goods. Mrs. Dobson had done no more than puff their goods like an auctioneer, or the puffing of somebody's tea or Ogden's cigarettes. They had agents all over the country, who were to puff the remedies, which were foodstuffs, and not go beyond a certain limit. Mrs. Dobson had never said that Viavi would cure the plaintiff. Mrs. Dobson was examined,

and said there had been no mention of cure. They did not advise people, but educated them as to a portion of their bodies of which they had been kept in ignorance, and left it to them to decide what to do. She had mentioned twelve months as a reasonable time to expect some result from the treatment. As lecturers their work was commercial and educational. She was without medical knowledge, except what she got from the Viavi books. She got 50 per cent. commission on all the medicine she sold. Miss Glassford, the managing director of the Viavi Company, in reply to questions by plaintiff's counsel, said she held all the shares in the company except seven 1*l.* shares held by seven different people. She put her shares at 20,000*l.* She provided the working-capital, which was 500*l.*

His Honour, in giving judgment, said these people were going about selling worthless remedies to poor people who knew nothing about their physical condition, and thereby making 50 per cent. profit. It was a miserable state of things that there should be people making a living in that sort of way, but so long as there was no conspiracy these knaves could go on, and were entitled by the law of the country to do so. Conspiracy was not charged in the case before him, but it was suggested. Nor was there false pretence, but there was a suggestion of it. He had only to decide whether there had been a contract to cure the plaintiff. The defendants had said they were only puffing the stuff, and gave no guarantee of its efficiency. As a matter of fact, it was worthless. This was morally but not legally a fraud. After weighing all the evidence in the case he came to the conclusion that there had been a contract. A more disgraceful document than the instructions to the agents of the company he had never seen in relation to a company. There would be judgment for the plaintiff for 50*l.* against defendants, with costs on the higher scale.

Mr. D'Arcy intimated that there would be an appeal.

New Companies & Company News.

CHARLES A. VOGELER COMPANY (LIMITED), chemists, has been registered at Somerset House, with capital of 75,000*l.*, in 1*l.* shares. Minimum cash subscription, 1,000*l.* The first directors are E. M. Geddes and L. C. Duncan. Qualification, 50*l.*

AMALGAMATED SOUTH AFRICAN STORES (LIMITED).—Capital 10,000*l.*, in 1*l.* shares. Objects: To acquire the business carried on at Cape Town as James Catto & Co., and to carry on the business of clothiers, outfitters, drug-merchants, &c.

VIDAL DYES SYNDICATE (LIMITED).—Capital 50,000*l.*, in 1*l.* shares. Objects: To adopt an agreement made between W. A. Hayward of the one part, and this company of the other part, and to carry on the business of manufacturers of and dealers in dyes, colours, paints, and chemical preparations of every description.

JAPANESE MINERAL-WATERS SYNDICATE (LIMITED).—Capital 3,000*l.*, in 1*l* shares (600 preference). Objects: To adopt an agreement with F. S. Balestra, and to carry on the business of manufacturers of and dealers in mineral and aërated waters and other drinks, &c. No initial public issue. F. S. Balestra is the first manager.

VACUUM OIL COMPANY (LIMITED).—Capital 100,000*l.*, in 1*l.* shares. Objects: To adopt an agreement with the Vacuum Oil Company of Rochester, U.S.A., and to carry on the business of producing mineral or vegetable oils of all kinds, and any products of mineral and vegetable oils. The first directors are H. B. Case, H. F. Grierson, and C. M. Everest. Registered office, 47 Victoria Street, E. C.

BLACKPOOL AND DISTRICT MINERAL-WATER MANUFACTURERS' AND BOTTLERS' TRADE-PROTECTION ASSOCIATION (LIMITED).—Registered with 50 members, each liable for 2*l.* Objects: As indicated by the title. V. Newsome is the president. The first directors are J. Quayle, T. Law, J. Dewhurst, W. F. Baldwin, T. Tallersall, and W. Hodgkinson. Registered office, 50 Dickson Road, Blackpool.

JOSIAH HYDE & SONS (LIMITED).—Capital 3,000*l.*, in 5*l.* shares. Objects: To acquire the business carried on at Wednesfield, Staffs, by Josiah Hyde, and to carry on the business of chemical-manufacturers, wholesale and retail druggists, chemists, dry-salters, oil and colour men, manufacturers of photographic, surgical, and scientific instruments, apparatus, and materials, &c. The subscribers are:—J. Hyde, High Street, Wednesfield, manufacturing chemist; Mrs. J. Hyde, High Street, Wednesfield; V. Hyde, High Street, Wednesfield, manufacturing chemist; F. Hyde, Vicarage Road, Wednesfield, manufacturing chemist; H. Hyde, 110 Varna Road, Birmingham, brassfounder; T. J. Carefull, 70 Selborne Street, Liverpool, engineer; and Mrs. M. J. Carefull, 70 Selborne Street, Liverpool. The first directors are J. Hyde (managing director), F. Hyde, V. Hyde, and Mrs. J. Hyde. Qualification, four shares. Registered office, High Street, Wednesfield, Staffs.

ALKAN (LIMITED).—Capital 500*l.*, in 1*l.* shares. Objects: To acquire the business carried on at 150 Strand, W.C., by Madame B. Alkan, trading as "B. and G. Alkan & Co.," as manufacturers of an anti neuralgic water called "Alkan," and to carry on the business of manufacturers and importers of and dealers in anti-neuralgic, pharmaceutical, medicinal, chemical, industrial, and other waters, preparations and articles, manufactures of cements, oils, paints, pigments and varnishes, drug, dyeware and colour-grinders, manufacturers of photographic, surgical, and scientific apparatus, &c. The first subscribers are:—J. M. Bathgate, 4 Vineyard Hill, Wimbledon, publisher; Bertha Alkan, 150 Strand, W.C., patent medicine proprietor; Miss E. Clark, 46 Nelson Road, Crouch End, N.; A. C. Crowe, 7 Hayes Place, W., clerk; G. J. Forster, 107 Fortess Road, N.W., clerk; G. A. Day, 38 Glengarry Road, East Dulwich, clerk; and C. H. Hicks, 30 Bedford Row, W.C., articled clerk. Registered without articles of association.

VIROL (LIMITED).—The first annual general meeting was held on May 22, Mr. B. S. Straus, chairman of the company, presiding, when the report and accounts were unanimously agreed to.

CASTNER-KELLNER ALKALI COMPANY (LIMITED).—The report of the directors for the year ended March 31 shows a gross profit of 65,581*l.*, out of which 15,550*l.* has been expended in repairs, renewals, and additions to the working plant, and the directors recommend that the whole amount be paid out of revenue. The net profit is 45,011*l.*, which, with 3,768*l.* brought forward, gives 48,779*l.* The directors recommend that a dividend at the rate of 2*l.* per cent. per annum be paid for the six months ended March 31, making the interim dividend already paid 5*l.* per cent. for the year, carrying forward a balance of 2,267*l.*

LIEBIG'S EXTRACT OF MEAT COMPANY (LIMITED).—The report of the directors for 1900 states that the sales of the extract of beef were again very satisfactory. The balance of the profit and loss account amounts to 145,168*l.*, and out of this has been paid: on February 15 an interim dividend of 5 per cent. on the ordinary shares, amounting to 25,000*l.*; on April 1 six months' interest at 5 per cent. per annum on the preference shares, amounting to 6,250*l.* The directors propose to appropriate the balance by paying a dividend on the ordinary shares of 15 per cent., equal to 3*l.* per share, making with the interim dividend 20 per cent. for 1900, 75,000*l.*; by carrying 15,000*l.* to reserve fund, and to employés' provident fund 2,000*l.* Deducting 10,270*l.* for directors' percentages, 11,648*l.* is left to carry forward.

BRUNNER, MOND & CO. (LIMITED).—The report of the directors for the year ended March 31 last states that there is a balance to credit of profit and loss account of 417,878*l.*, which, with 108 447*l.* brought forward, makes a total of 526,325*l.* The directors propose to deal with this balance as follows:—Interim half-yearly dividend on the preference capital at 7 per cent. per annum, paid on December 6, 1900, 27,144*l.*; dividend now to be paid on the preference capital at 7 per cent. per annum, 27,490*l.*; interim half-yearly dividend on the ordinary capital at 30 per cent. per annum, paid on December 6, 1900, 153,797*l.*; dividend now to be paid on the ordinary capital, making 35 per cent. for the year, 208,263*l.*; amount to be written off patents account, 2,500*l.*; amount to be placed to reserve fund, 69,000*l.*; balance to be carried forward, 38,131*l.* The company have brought the reserve fund up to 632,910*l.*, and the property and assets of the company are set down at 3,080 393*l.*

W. J. BUSH & CO. (LIMITED).—The report for 1900 states that the gross profit amounted to 65 050*l.*, an increase of 552*l.* The net profit, 11,958*l.*, together with the amount brought forward, amounted to 12,472*l.* An interim dividend, at the rate of 5 per cent. per annum, was paid on the ordinary shares on November 13 and it is not proposed to declare a further dividend; but 2,500*l.* has been placed to reserve fund, which now amounts to 12 000*l.*, and 597*l.* is carried forward. In the course of the report reference is made to the company's operations generally, and it is stated that it has been found necessary to alter the contract with the Société Anglo-Française des Parfums Perfectionnés.

Pharmaceutical Local Meeting.

THERE was a representative attendance of local chemists at the Rougemont Hotel, Exeter, on May 16, when the Vice President of the Pharmaceutical Society (Mr. C. B. Allen), Mr. C. J. Park, and Mr. R. Bremridge attended as a deputation. The President of the Exeter Association of Chemists and Druggists (Mr. E. Lemmon) was Chairman, and numerous apologies for non-attendance were intimated from members of the Association, many of whom expressed themselves in favour of the proposed

PHARMACY BILL.

After Mr. ALLEN had explained the new Bill at length, and Mr. PARK had supported him, Mr. J. HINTON LAKE moved—

That this meeting, having heard and carefully discussed the amended Pharmacy Bill, approves of the general principles of the Bill, and pledges itself to do its very utmost to facilitate the Bill passing through Parliament.

Mr. SARSON (Paignton) seconded, believing that the Bill would promote the general interests and welfare of pharmacy throughout the country.

Mr. SMITH (formerly of Torquay) severely criticised the phraseology of the Bill, especially in regard to Clause 2, the wording of which, he said, was vague and ambiguous. There should be a clear definition of a medical prescription and a poison. He strongly advised the Council to state in plain language what they meant, and not trust to legal draftsmen. He had no faith in them; they did not understand the technicalities of pharmacy. It was very essential that they should state that what was wanted was personal supervision. "Under the supervision" in Clause 2 should be "Under the *personal* supervision." This was the most important clause of the whole Bill, and there should be plain language—a spade should be called a spade.

Mr. ALLEN said the Council were satisfied by the eminent legal draftsman to whom the phraseology of the Bill had been entrusted that the terms used properly conveyed what was meant. He disagreed with Mr. Smith that there would be any difficulty either in regard to the definition of a medical prescription or a poison, whilst the word "supervision" had already been defined by Justice Hawkins in the Law Courts.

Mr. SMITH retorted that they did not want to create the necessity for the Law Courts to give another definition. In Clause 4 there was another ambiguous term in regard to the ownership of a shop. Of course a person might be the owner of a shop who was not a pharmacist, although his tenant kept a pharmacy. The Bill was not emphatic enough. Many members of Parliament would vote for any mortal thing so long as they were told it was for the benefit of the public. They did not care anything for the pharmacist. Therefore let them start the Bill something like this:—"For the more effectual protection of the public and the more careful dispensing of poisons, potent drugs, and compound mixtures." The Bill wanted strengthening, and he was fully persuaded that unless they did it they would find that the shadow was left and the substance gone.

Mr. NEWLYN agreed with Mr. Smith that the Bill was in need of strengthening. He feared if the Bill passed as it stood they would find, within a short time, that there were those who had found a way to drive through it.

Mr. P. F. ROWSELL regarded the Bill as a very earnest attempt to meet a real difficulty. The Council could not dictate on purely trade matters, he said, but he put in a plea for the good work done in that line by the Proprietary Articles Trade Association and the Chemists' Defence Association.

Mr. D. REID approved of the Bill, but Mr. H. GADD agreed with Mr. Smith that there was a necessity for stiffening. He hoped the question of *locum tenens* would be seriously considered, so that they might not open a door to a great deal of abuse. He suggested that it would be advantageous to have a clause inserted in the Bill that registered persons should take out a certificate every year, which would necessitate them paying a registration-fee.

Mr. SMITH said it appeared to him that Clause 11 was weaker even than Clause 2, and he believed it would be strengthened if the words "medical prescription" were inserted.

Mr. C. R. M. CLAPP (honorary solicitor of the Exeter Association) said he quite agreed with Mr. Smith as to the necessity for calling a spade a spade. Although, for instance, they might have a legal definition of what was "supervision" by a registered person, if they could insert any word which would make the meaning more clear, it certainly could not do any possible harm. It would only be inserting a word which would not go any further than the decision itself.

Mr. T. C. MILTON said he was in favour of the Bill, because he regarded it as the strongest they were likely to get through Parliament.

Mr. HANDFORD also supported the resolution, which was carried unanimously.

ET APRÈS.

The company afterwards sat down to high tea, the Mayor of Exeter (Mr. A. E. Dunn) and the Sheriff of Exeter (Mr. T Linscott) being present. The MAYOR proposed "The Pharmaceutical Society of Great Britain," and referred to Mr. Tickle, who is shortly to be intimately connected with the Corporation of Exeter as city analyst. He also specially mentioned Mr. Bremridge as an Exeter man, whose father formerly carried on business as a chemist in Exeter. Mr. ALLEN replied for the Society, as did also Mr. PARK; and Mr. BREMRIDGE read a letter from his father regretting his inability to be present. The SHERIFF proposed "The Exeter Association of Chemists and Druggists and other local Associations," and the CHAIRMAN responded. Mr. H. F. BOURNE also replied on behalf of the newly formed Torquay Association.

Westminster Wisdom.

AN IRISH GOVERNMENT LABORATORY.

In the House of Commons on Thursday, May 16, Mr. Field asked the Chief Secretary for Ireland whether a Government analyst and chemist to the Lord Lieutenant will be appointed in Ireland, seeing that the Somerset House analyst is obliged to do Irish work, and that in certain cases the journey renders the article almost unfit for analysis. Mr. Wyndham replied: The number of articles sent from Ireland to the Government laboratory at Somerset House is very small, consisting usually of samples of milk and an occasional sample of whisky. The other articles are mainly drinking-waters. There is no reason to suppose that the time occupied by the journey renders the article "almost unfit for analysis."

The Alkali-works Regulation Bill was read a third time in the House of Lords on May 20, passed, and sent to the Commons.

New Books.

Beringer, C. and J J. *Text-book of Assaying for those connected with Mines.* 7th ed. $7\frac{7}{8} \times 5\frac{1}{4}$. Pp. 472. 10*s.* 6*d.* (Griffin.)

Frankland, P., and Mrs P. *Pasteur.* $7\frac{1}{2} \times 4\frac{3}{4}$. Pp. 224. 2*s.* 6*d.* (Cassell.)

Hill, J. W. *Diseases of the Cat.* $7\frac{1}{2} \times 4\frac{7}{8}$. Pp. 136. 3*s.* 6*d.* net. (Baillière.)

Koch, L. *Die Mikroskopische Analyse der Drogenpulver.* Part 3. Lithographed plates. 3m. 50p. (Gebrüder Borntraeger, 17A Schönebergerstr., Berlin.)

Leask, A. R. *Refrigerating-machinery: its Principles and Management.* 75 Illus. $7\frac{1}{2} \times 4\frac{7}{8}$. Pp. 296. 5*s.* (Simpkin.)

Martin, W., and Rockwell, W. H. *Chemistry of Physics.* Cr. 8vo. 7*s.* 6*d.* net. (Hirschfeld.)

Pembrey, M. S., and Phillips, C. D. F. *Physiological Action of Drugs.* Intro. to Practical Pharmacology. $8\frac{5}{8} \times 5\frac{1}{2}$. Pp. 108. 4*s.* 6*d.* net (E. Arnold.)

Purdy, C. W. *Practical Uranalysis and Urinary Diagnosis.* 5th ed. $8\frac{5}{8} \times 5\frac{3}{8}$. Pp. 414. 15*s.* net. (H. Kimpton.)

White, W. Hale. *Materia Medica, Pharmacy, Pharmacology and Therapeutics.* Sixth edition. Pp. 678. Fcap. 8vo. 7*s.* 6*d.* (J. & A. Churchill.)

Correspondence

TO CORRESPONDENTS.—Please write clearly and concisely on one side of the paper only. All communications should be accompanied by the names and addresses of the writers. If queries are submitted, each should be written on a separate piece of paper. We do not reply to queries by post, and can only answer on subjects of general interest.

A Hint to "Patent" Makers.

SIR,—Will you allow me space in your valuable columns to call the attention of the proprietors of various English patent medicines to a very real grievance we in this Southern Hemisphere have against them? I refer to their custom of advertising English prices in colonial papers, leading any reader to imagine that the article referred to may be obtained at that price. Let me give a few instances, all taken from the same paper (the *Warwick Examiner*):—

Floriline. . . . Price 2*s.* 6*d.* of all chemists and perfumers.

Mrs. Winslow's soothing-syrup is sold by medicine-dealers everywhere at 1*s.* 1½*d.* per bottle.

The Mexican hair-renewer, sold by chemists and perfumers everywhere at 3*s.* 6*d.* per bottle.

Brown's bronchial lozenges . . . are now sold by most respectable chemists in this country at 1*s.* 1½*d.* per box.

Clarke's blood-mixture. . . . Of chemists everywhere at 2*s.* 9*d.* and 11*s.* per bottle.

I could multiply these examples indefinitely almost. Now let me give an idea of what they cost us buying in the ordinary wholesale manner in Brisbane, the capital of our State, and, in my case, the nearest port:—Floriline, 33*s.* per doz.; Winslow's syrup, 13*s.*; Mexican hair-renewer, 40*s.*; Brown's bronchials, 11*s.* 6*d.*; Clarke's blood-mixture, 38*s.* (small size). The terms are 2½ per cent. discount at thirty days, all packing-cases extra. In my own case—138 miles by rail from Brisbane—the railage always ranges from 5 to 10 per cent. on each lot of goods sent up. If the proprietors of English patent medicines wish chemists in these countries to in any way help them to sell their goods, they should omit to mark the price of those goods in their advertisements and showcards and handbills, unless they specify that those prices are those ruling in England. Some may say that by purchasing in large quantities we could get better terms; and so we could, but it would not pay us to lay in a stock of, say, six dozen Floriline with our yearly sales 1½ dozen, or twelve dozen Winslow's syrup when we sell annually, say, three dozen, or maybe even six dozen. Until we are considered in such matters as these the proprietors who adopt the above methods will get very little help from any chemists in these latitudes.

Yours truly,
THOS. F. HALL, Ph.C., M.P.S.Q.

Pittsworth, Queensland, April 5.

Common Turpentine.

SIR,—In the "Miscellaneous Inquiry" column of the issue for May 18, I notice an inquiry *re* "Common turpentine," which you say you take to be oil of turpentine. It is an ingredient sometimes asked for in my pharmacy, and is used in making veterinary ointment, for green salve, or gelding-salve as it is termed here. What is always sold is "Venice" turps—a mixture of resin and turps, in proportions of 2 lbs. resin to 1 pint turpentine. This will probably be what is meant in your inquirer's case. R. H. (163/41.)

Cleopatra's Hair-restorers.

SIR,—I do not find anything in "Gerard" that lends much colour to Mr. Ashton's suggestion that by "oak-gum" in Cleopatra's recipe for the hair mistletoe is meant, but it is a fact that mistletoe was used in hair-washes in olden times. Here is an instance from Professor Henslow's "Medical Works of the Fourteenth Century," page 130:—"For to make yelow here. Take mystyldene of the oke, and mystyldene of the quyus-tre, and mystyldene of the appil-tre, and take as myche of quyus-tre as of the other 2; and make lye of the asches, and wasche his hed ther-with." Now Cleopatra, being a Greek, would probably have yellow hair, and this would therefore be the fashionable colour for hair among the ladies of her Court. Hence, perhaps, the "oak-gum" (*Viscus quercinus*) in her hair-wash. Mr. Ashton's suggestion that for "vine-rag" we should read "vine-bark" is good. May I thank him for his very interesting letter, and at the same time recommend Mr. Bernard Shaw's plays to such of your readers as have not met with them?

Yours, &c.,
Epworth, May 18. C. C. BELL.

SIR,—It is absurd for Mr. C. S. Ashton to suggest that "vine-rag" should read "vine-bark." The "rag" is simply mis-spelled, and should read "gar," hence "vine-gar" = vinegar! Faithfully yours,
Bradford, May 17. T. GARRATT FORSHAW.

Art and Pharmacy at the Academy.

"TELL me not in mournful slumbers
Pharmacy is but a dream,
And though soulless here in numbers,
Art displays what might have been;
Speak I must,"
Said the bust.

"Want and suffering lie enshrouded
Round the millions as they fall
Wearied on the wayside, goaded
By the modern Crœsus' call
And gold's lust,"
Quoth the bust.

"Pain and sickness follow after,
Fell disease and misery.
Can naught arrest grim Death's laughter?
Can naught pay his fearful fee
But grave dust?"
Quoth the bust.

"Though Art scoffs, the handmaid Med'cine,
In attempts to save the doom,
Smooths the pillow of the dead son
Of the widow, ere the tomb
Enclose his dust,"
Quoth the bust.

"Galen's sons, I charge you ever,
Gaunt disease is always rife;
More than man be, minor never,
Aim a nobler, higher life,
Hope and trust,"
Says the bust.

"Shame and honour do not follow
From the work the hands may do;
Honour comes, though age may mellow,
Only let the work be true,
Fair and just,"
Says the bust.

May 18, 1901. (248/10.)

I think, dear Sir, 'twas hardly right of you my verse to mutilate.
Your grammar too, Sir, if I might just mention, it's in parlous state;
For tenses, Sir, like certain drinks, though "perfect," 'tis unwise to mix,
And in my "line" those extra links 'twere "meter," Sir, you should not fix.
Tautology's a serious crime, and so, I take it, 's "*love* to *dote* on": I know I've sinned, Sir, in my time, but *this* the foolscap ne'er I wrote on;
And though I'm but a "Minor" poet, I trust, Sir, for my reputation
You'll let those know who ought to know it, 'twas yours, not mine, the aberration.

FRANK M. TAUBMAN.

[A foot or two the poet left upon the Chelsea sward—
'Twas these and "love" that we threw in: all else came from the bard.—EDITOR.]

Appreciation.

SIR,—THE CHEMIST AND DRUGGIST has been a splendid investment this year, having sold all goods I advertised in Exchange Column with satisfaction, and I advise those who cannot sell an article or preparation quick enough to use the Supplement as someone else may be able to use the goods in another district. Yours faithfully,
W. F. P. (248/15.)

*** *Other correspondence, including replies to queries, is held over.*

Canada at the Glasgow Exhibition.

IN our preliminary notice of the Exhibition we indicated that of all the British colonies Canada easily takes premier place. This is due not simply to the fact that a much larger amount of space has been utilised, but to the variety and quality of the exhibits. In a word, Canada has done well. The response to the request that she would take part officially in the Exhibition was made with the greatest cordiality, and the magnificence of the Canadian Court in the Industrial Hall, and of the Pavilion in the grounds, compel the admiration of every visitor. The exhibit is superior to that made by Canada at the Paris Exhibition, and in some parts it is altogether distinct and new. The most interesting part of it, as well as the largest, is that devoted to horticulture, agriculture, and forestry placed in the Pavilion. Entering this building from the west door we find on each side a display of agricultural implements and machinery. Then we pass under an arch in the form of a small building, of which the roof, doorways, lintels, pillars (painted to look like wood and stone), and embossed lining (which is like anaglypta embossed paper) are all made of steel. Passing through this arch one comes to the central object—an agricultural trophy. This exhibit is octagonal in form, 21 feet broad at the base and 35 feet high, and is made up of several thousand samples of grain, illustrative of some hundreds of varieties, both in the seed and in the straw. The seeds are shown in glass jars, and they include practically every known variety of cereals and leguminous seeds that are used as food for man or cattle, and the straw with the corn attached is built up in little sheaves and bundles, the whole forming a most attractive combination.

The horticultural exhibits consist of a large display of apples and soft fruits. Of the former there are at least fifty varieties, which are set out on upwards of 170 plates and baskets. All these apples have been kept in cold storage from the time of gathering, both in Canada and Glasgow, and appear as fresh as if taken from the trees yesterday, and, in taste, are "just as good" The remainder of this section contained upwards of 1,200 glass jars of peaches, plums, pears, quinces, cherries, grapes, strawberries, raspberries currants, gooseberries, &c. Some of the specimens are much larger than we are accustomed to see in this country. Our representative opened several of the jars, and came to the conclusion that the preservative-fluid is a weak solution of formaldehyde. The collection comes from all parts of the Dominion, and every bottle has a label giving full particulars as to the contents and the locality where the fruit has been grown.

The forestry-exhibit comprises some 250 or more specimens of wood in various forms. Canada possesses no fewer than 123 species of trees native to the country, 94 species occurring east of the Rocky Mountains, and 29 on the Pacific coast. A few years ago the pine-industry was at the front, but recently there has been a revolution in the lumber-industry, especially in the relative value of spruce. This is due to the development of the demand for wood-pulp, which has given to Canada's spruce-trees a value largely beyond the value of the pine-trees. In 1891 the amount invested in pulp-mills in Canada was under three million dollars; to-day it is about six times that, and the capacity of the mills last year was over 1,200 tons a day. Some very fine blocks of pulp are on exhibition. The variety of wood in Canada is enormous, the forests containing, besides pine and spruce, oak, elm, maple, beech, birch, butternut, hickory, bass, cherry, fir, aspen, poplar, cedar, and black ash. The greatest compact reserve of timber in the world is believed to be possessed by British Columbia, the wooded area being estimated at 285,000 square miles. In view of the enormous trade now being done in timber it is satisfactory to have the assurance that the forces of protection and reproduction are now practically as powerful as those of destruction. Manufactured wood articles are exhibited also.

The Canadian Court, in the Industrial Hall, contains groups of exhibits illustrating natural and industrial produce. Honey is a brilliant display, a small pyramid of comb-honey being surrounded and surmounted by jars of run honey; maple products, butter, cheese, and meats of all kinds also abound.

Produce Notes.

The Bulgarian Otto-of-Rose Crop.

(From a Kezanlik Correspondent.)

The general outlook of this year's rose-crop is, on the whole, pretty fair. Of course, no one in Kezanlik expects a rich crop like last year's. That was a wonderful and exceptional one, the like of which happens only once in every decade. Even under the most favourable harvest weather the present crop can only be an average one. On account of the early spring and the warm weather in March the crop is rather in advance, and the distillation throughout the whole district promises to begin about a fortnight earlier than usual. It has already begun in the most southern localities, but in the Balkan valleys of Toundja and Strema it will hardly commence much before the end of this month. The budding season is now over, and, judging from the yield of rose-buds, the crop will probably be 25 or 30 per cent. less than last year. While last year's crop was variously estimated from 115,000 to 130,000 T. oz., this year's may be only about 80,000 T. oz. The rose-bush is a delicate plant and most susceptible to the changes of the weather, March was rather warm; but all through April we had very abnormal weather, accompanied with snow and frost. This considerably affected the yield of rose-buds, and instead of having clusters of seven or fourteen rose-buds, which is usually the case when a crop is rich, this year's clusters rarely show more than five buds. In addition, many rose-plantations have suffered from hailstorms, spring frosts, and destructive caterpillars, and nearly all the old rose-plants are more or less damaged from the winter cold. The main factor, however, which affects a crop is the weather during the harvest-time, when the rose-flowers are being gathered and distilled. This is yet to come. It may change, and upset all previous calculations and early forecasts. As last year's wonderfully fine crop sold at a very low price nearly the whole of it was bought up by the exporters, and very little old otto is left in the hands of the growers; but some of the exporting houses have fair stock on hand. Small lots lately sold here have realised prices from 16*s.* 6*d.* to 17*s.* 6*d.* per T. oz. We shall send you full and definite information after the harvest.

Contract for Copper Sulphate.

The *Madrid Gazette* of May 9 contains a notice calling for tenders, which will be opened thirty days from the publication of the notice in the *Gazette*, at 11 A.M., in the office of the Director-General of Posts and Telegraphs, Carretas No. 10, for the supply of 21 tons of sulphate of copper for the service of the electric jars in the telegraph stations during the present fiscal period, at the upset price of 970 pesetas, or 28*l.* 5*s.*, per ton. A provisional deposit of 5 per cent. of the amount of the contract at the upset price is required to entitle any tender to consideration.

Citronella Oil in Ceylon.

The March issue of the *Tropical Agriculturist* contains a translation of an interesting paper on "Ceylon and its Botanic Gardens," by Dr. Treub, Director of the Buitenzorg Gardens, Java, who has recently concluded a visit to Ceylon. While on a trip to Galle he learned that the cultivation of citronella grass is steadily increasing, although it does not pay Europeans to cultivate the grass and prepare the oil. A European proprietor living fifteen miles from Point de Galle, who occupied himself therewith and distilled the oil, had to give up the business, although he obtained higher prices for his product than the native people. Dr. Treub endeavours to prove by figures furnished him how profitless the business is. He says: "In the first two years there is no crop, then every year for a space of ten to twelve years. Then the grass can be cut four to five times a year. From each cutting is obtained from sixteen to twenty bottles of citronella oil per acre (bottles of 22 Eng. oz.). For this oil the native producer gets 85c. a bottle. Thus under the most favourable circumstances the profit obtained amounts to 15r. per acre per annum." These statements, he says, rest partly on verbal communications of very experienced persons.

The Malaga Almond Crop.

Inquiries have been made from the United States as to the prospect of the coming almond crop in this district, but it is considered too early to speak with any confidence, and nothing positive can be said before the middle of May. In so far, however, as can be judged at the present time (April) the crop is fully as promising as at the same period of last year. Incidentally, it is stated that the frost has done some damage in the neighbourhood of Granada, but probably not to any great extent. Of last year's crop of almonds many boxes still remain in Malaga unsold on account of the high prices demanded.

Trade Report.

NOTICE TO BUYERS.—The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers stock the goods. Qualities of drugs and oils vary greatly, and higher prices are commanded by selected qualities even in bulk quantities. It would be unreasonable for retail buyers to expect to get small quantities at anything like the prices here quoted.

42 Cannon Street, London, E.C.: *May 23.*

INTEREST has principally centred in quinine this week, and a fair speculative business has been done at practically dearer prices again. The improvement may be attributed to the advance in the unit at the cinchona-sale on Tuesday and the good demand that prevailed, which points to depleted stocks of bark in makers' hands. Otherwise there are few features of interest to report. Soy is 3*d.* per gallon dearer, owing to the fact that the Customs authorities have analysed a parcel containing 40 per cent. of sugar. Higher prices are asked for ergot owing to scarcity, and citric acid is obtainable at lower rates. The following are the principal alterations of the week, including those recorded at the drug-auctions :—

Higher	Firmer	Easier	Lower
Cinchona	Buchu	Acid, citric	Asafetida
Isinglass	Ergot	Balsam Peru	Cassia lignea
Nutmegs	Pimento	Cloves	Coca-leaves (Ceylon)
Nux vomica		Menthol	Ginger (Jam.)
Quinine			Honey (Jam.)
Senna-pods			Ipecac. (Cart.)
Soy			Rhubarb (Shensi)
			Tamarinds (W.I.)
			Wax (Jam.)

Arrivals.

The following drugs, &c., have arrived at the principal ports of the United Kingdom from May 16 to 22 (both inclusive):—Aloes (Cape) 111 cs.; arrowroot (St. V.), 1,302 pkgs.; benzoin, 12 cs.; boric acid (Ital.), 92; buchu, 21; cardamoms, 41; castor oil (Belg.) 28 brls., Ital.) 25 cs.; chamomiles, 6; chillies (@ Kobe), 275; cinchona, (@ Calicut) 189 bls., (@ Ceylon) 50 bls., (@ Mollendo) 97 bls.; cocoa-butter (@ Amsterdam), 162 bls.; cod liver oil, (@ Aalesund) 161, (@ Bergen) 73; condurango (@ Payta), 14; drugs, (@ Puerto Colombia) 42 pkgs., (@ Monte Video) 70 bls.; galls (Persian), 4,025 bags, of which 1,108 are in transit, (@ Hong-Kong) 100 cs.; ginger (Jam.), 60 brls, (@ Kobe) 150, (@ Yokohama) 100 bgs., (@ Hong-Kong) 200 cks.; gum, unenumerated (@ Persian Gulf Ports), 86 cs., 872 pkgs., 1,530 bags; gum tragacanth, 164; honey, (Chil.) 403 brls., (Jam.) 67 pkgs.; kola (W.I.), 1; manna, 2; opium, (Persian) 29 cs., (@ Marseilles) 8, (@ Colombo) 15; quinine, 3 cs.; roots (@ Marseilles, 82 bls.; saffron (@ Valencia) 3 cs.; scammony-root, 17 bales; soy (Chin.), 4; tamarinds (@ Madras), 28 bdls.; turmeric, (@ Cochin) 172 bags, (@ Bombay) 300 bags; wax, bees', (Chil.) 91, (Jam.) 6, (@ Hamburg), 12, (Morocco) 9, (Ital.) 16.

Heavy Chemicals.

[*These prices are for market-centres other than London.*]

With the exception of a slightly heavier demand for export there is nothing of change or special importance to be recorded regarding heavy chemicals. Matters are much the same at all the principal centres, and the tone all round cannot be described as being anything but very quiet, and general demand is much less than is usual at this period of the year. Values show very little fluctuation.

ALKALI PRODUCE.—Ammonia-alkali is about the only product that keeps in good steady demand. Bleaching-powder, caustic soda, chlorates, and prussiates are all very quiet. Soda-crystals are in fair request, and keep steady, and saltcake also maintains a firm tone.

LINSEED AND COTTONSEED CAKES are in continued steady demand, and ruling prices are firm, with some tendency towards firmer rates. Linseed-cakes, 95 per-cent. pure, 7*l.* 15*s.* to 8*l.* per ton. Oil-cakes, 6*l.* 15*s.* to 7*l.* per ton. Cotton cakes, best makes, 4*l.* 15*s.* to 5*l.*, and seconds, 4*l.* 10*s.* to 4*l.* 15*s.* per ton.

ALUMINA-PRODUCTS.—Demand in this branch as in others shows a falling-away of late, and at present is only moderate. In spite of this state of affairs, however, prices are fully maintained at late rates. The tendency of values is certainly more towards advancement than anything else, for prices have been abnormally low for a long time. Sulphate of alumina, purest white and best makes, practically free of iron, 85*s.* to 92*s.* 6*d.* per ton, free on rails in casks, with usual allowances for bags and loose slabs. Crystal alum steady, and keeps moving fairly well. Loose lump, 5*l.* to 5*l.* 2*s.* 6*d.* per ton; lump in tierces, 5*l.* 5*s.* to 5*l.* 7*s.* 6*d.* per ton; and ground in bags, 5*l.* 12*s.* 6*d.* to 5*l.* 15*s.* per ton. Aluminoferric, 57*s.* 6*d.* to 67*s.* 6*d.* per ton, according to condition and delivery. Aluminous cakes, 57*s.* 6*d.* to 65*s.* per ton. Hydrate of alumina, highest percentage Al_2O_3, and purest quality, 11*l.* 15*s.* to 12*l.* 5*s.* per ton, in large casks. Hydrate of alumina, special pulp, 12*s.* 6*d.* to 15*s.* per cwt., according to quantity. Hydrate of alumina, purest pulp-dried, 37*s.* 6*d.* to 38*s.* 6*d.* per cwt., in casks. Ground, 38*s.* to 39*s.* per cwt. Carbonate of alumina, 35*s.* to 37*s.* 6*d.* per cwt., according to quantity. Aluminate of soda, high strength Al_2O_3, 37*s.* 6*d.* to 40*s.* per cwt. Chloride of-alumina solution, 13*s.* to 15*s.* per cwt., in barrels.

Liverpool Drug Market.

Liverpool, May 22.

CASTOR OIL.—Sales of good seconds Calcutta have been reported during the week at 4$\frac{1}{8}$*d.* per lb., ex quay, but now that the quay has been cleared, store parcels are firmly held at 4$\frac{1}{4}$*d.* per lb. First-pressure French, owing to further arrivals, has eased off in price on the quay, sales being reported at 3$\frac{1}{8}$*d.*; for store parcels 3$\frac{1}{4}$*d.* to 3$\frac{3}{8}$*d.* is now asked. Second-pressure French is held at 3$\frac{1}{8}$*d* in store.

QUILLAIA-BARK.—Sales are reported at 13*l.* 5*s.* to 13*l.* 10*s.* per ton, according to quantity, and there is more inquiry for the article generally.

CHILLIES.—Of Sierra Leone, 34 bales new crop bright red have changed hands at 47*s.* 6*d.* per cwt.; 52*s.* 6*d.* is now asked for the remaining small stocks.

TURPS is slightly easier for the week at 27*s.* 9*d.* per cwt., at which business is passing.

BEESWAX, CHILIAN.—A small parcel of pale yellow has been sold at 7*l.* 12*s.* 6*d.*, and 4 packages good yellow 7*l.* 7*s.* 6*d.* per cwt. Grey to yellow mixed is held firmly at 7*l.* 2*s.* 6*d.* to 7*l.* 5*s.*

SCAMMONY-ROOT.—A further arrival has taken place, and the quantity available has been increased to 66 bales; 40*s.* per cwt. is asked by importers, a slightly lower bid having been refused.

HONEY.—Of Peruvian, 200 to 300 kegs of low pile have changed hands, but the price was not allowed to transpire. Chilian, Pile X., is held firmly at 32*s.* to 33*s.* 6*d.* per cwt.; Pile 1, 27*s.* to 28*s.*; Pile 2, 24*s.* to 25*s.*; Pile 3, 22*s.* to 23*s.* per cwt.

AFRICAN GINGER.—The demand continues, and sales are reported at 32*s.* to 32*s.* 6*d.* per cwt. for new crop.

COCHIN GINGER.—At auction 100 bags offered; 35*s.* was bid, but refused, holders wanting 40*s.* per cwt.

ACACIA SORTS.—There have been some large arrivals during the week, but a considerable proportion of the serons have been withdrawn from the market. Sales of soft white have been made at 57*s.* to 57*s.* 6*d.* The trade seems to be recurring to old channels, and supplies are again becoming regular.

COPAIBA.—Values are unaltered, with small sales on the basis of 2*s.* 2$\frac{1}{2}$*d.* per lb. for bright Maranham.

WAX, CARNAUBA, is steadily moving upwards, the sales including 72 bags ordinary to good Ceara at 60*s.* to 72*s.* 6*d.*, and 285 bags ordinary to good Pernambuco and Ceara at 44*s.* to 50*s.*, with 355 bags Maranham at 45*s.* 6*d.* to 52*s.* 6*d.* per cwt.

American Drug Market.

New York, May 14.

Changes in price have been few and unimportant. General business is fair, but sales are not heavy.

ALOES.—Arrivals of Curaçoa have been small, and the market has a steady tone, with dealers quoting 4c. to 4$\frac{1}{4}$c. per lb.

ASAFETIDA has sold in jobbing quantities at 32c. to 34c. Dealers quote 30c. to 35c., and anticipate higher figures.

BALSAM TOLU is in sympathy with London, and quotations are a fraction higher, at 27$\frac{1}{2}$c. per lb.

BUCHU.—Arrivals have eased off the market, and supplies are now offering at 28c. per lb.

CANNABIS INDICA.—The market is strong, and only limited quantities are available at 50c.

COCAINE is firm at the recent advance to $6 per oz.

ERGOT is easier, and supplies of Russian are obtainable at 49c per lb.

Jalap is in better demand, and some holders are waiting for higher prices. Good-quality root is offered at 12½c. to 13½c.

Oil of Peppermint is in a very strong position, and the outlook is for a high market. Supplies are well concentrated. Western oil is firm at $1.20 to $1.25, with but little available at the inside figure. HGH is quoted from first-hands at $1.50.

Opium is barely steady, at $3.20.

Quinine.—The market is firmer since the last bark-sale, but quotations remain at 32c. per oz. for German and 34c. for domestic make.

German Drug Market.

Hamburg, May 20.

Our drug-market shows very little business at present, and only a few articles meet with interest just now.

Agar agar remains quiet, at 380m. per 100 kilos.

Balsam Peru is also quiet, at 11¾m. per kilo.

Camphor (Refined) shows a firm market, with second-hand holders asking 460m. per 100 kilos.

Condurango-bark is unchanged, at 100m. per 100 kilos.

Coca-leaves are tending firmer, at 300m. to 350m. per 100 kilos.

Cocaine is unchanged, but firm, at 700m. per kilo.

Ergot is advancing, and very firm, with an improving demand. Russian, of good quality, is held to-day for 460m. per 100 kilos.

Ipecacuanha.—Rio keeps firm and scarce, at 29½m. per kilo. Cartagena quiet, at 14m. per kilo.

Lycopodium is dull and lower, with sellers at 417½m. per 100 kilos.

Quinine is unchanged, at 46m. per kilo.

Senega is quoted 350m. per 100 kilos.

Sugar-of-milk is quiet, at 86m. per 100 kilos.

Menthol is dull of sale, at 25½m. per kilo.

Carnauba-wax shows a very firm market, with a good demand.

Wax (Japanese) is steady, at 61½m. per 100 kilos.

Cod-liver Oil is tending firmer, non-congealing being quoted to-day at 65m. per barrel.

Linseed Oil is very firm, and stocks of spot oil are almost exhausted.

Cablegrams.

Hamburg, May 22, 2.20 p.m.:—Agar-agar is dull of sale at 360m. per 100 kilos. Ergot is firmer, at 470m. per 100 kilos., and jalap is scarce, at 115m. Turpentine is advancing.

* * * *

Bergen, May 23, 12.20 p.m.:—The catch of codfish up to date amounts to 34,658,000 fish, as against 28,764,000 at the same time last year. This is calculated to yield 29,397 barrels of oil, as against last year's 24,650. The Finmarken fishing-operations have been considerably interrupted recently owing to stormy weather and scarcity of bait. The firmer tendency prevalent on the market is still maintained, and 58*s.* per barrel, f.o.b. Bergen, is now the price for best non-congealing oil.

* * * *

New York, May 23 3.38 p.m.:—Business here is quiet. Opium is easy, at $3·20 per lb. Cartagena ipecacuanha is lower, at $1·85 Ergot is also lower, at 56c. per lb. Menthol is easier, at $3·85. Coca-leaves are hardening, at 23c. for Truxillo and 34c. for Huanoco. Short buchu are scarce, at 28c. per lb., and long leaves, at $1. Senega is easy, at 30c. per lb.

London Markets.

Acid, Citric.—Quiet. The makers' price for English crystals is now 1*s.* 4½*d.* per lb., but in second-hands sellers could be found at 1*s.* 4¼*d.* and probably a shade under.

Aconite.—Further small sales of German napellus have been made at 47*s.* 6*d.*, spot.

Arrowroot.—At auction on Wednesday good St. Vincents in tins sold at 3½*d.*, fair in barrels being bought in at 1⅞*d.* to 2*d.* per lb.

Belladonna-root.—There is a good inquiry, but the market is very bare of suitable quality.

Chamomiles.—For fairly good Belgian flowers as much as 92*s.* is asked on the spot. One importer states that he has sold out of No. 2 grade.

Cinchona.—Supplies were on a considerably larger scale at the auction on Tuesday, but an excellent demand, with good competition, prevailed, and the bulk of the catalogues was cleared at an advance of 5 to 7 per cent., the unit of fully 2*d.* being obtained, against 1⅞*d.* at the last auction, and 1 13/16*d.* at the last Amsterdam sale.

The following were the quantities of bark offered and sold:—

	Packages offered.	Packages sold.
East Indian cinchona	1,917	1,470
Cuprea cinchona	697	500
Ceylon cinchona	635	490
Jamaica cinchona	290	240
South American cinchona ...	266	201
Java cinchona	176	157
African cinchona	100	100
	4,081	3,208

The following table shows the approximate quantities of bark purchased by the principal buyers:—

	Lbs.
Agents for the Brunswick factory	132,954
Agents for the Mannheim and Amsterdam factories	132,045
Agents for the Frankfort and Stuttgart factories	120,136
Agents for the American factory	67,855
Messrs. Howards & Sons	62,808
Agents for the Imperial factory	47,091
Agents for the Paris factory	12,065
Druggists, brokers, &c.	79,010
Total quantity sold	653,964
Bought in	111,411
Total quantity offered	765,375

The prices paid were as follows:—

Jamaica.—Officinalis, quilly chips, 5⅞*d.* to 6*d.*; small chips, &c., 4¾*d.* to 5⅞*d.*; and Ledgeriana, original stem, branch, and root, 6⅝*d.* per lb.

African.—Red quill, 6⅞*d.* to 7*d.* per lb.

Java.—Crushed Ledgeriana, 8⅜*d.*; and root, 4¾*d.* to 4⅞*d.*

South American.—Bolivian cultivated Calisaya quill, 7⅞*d.* to 9¾*d.*; good, 10*d.* to 10⅜*d.*; and very rich, 11¼*d.* to 1*s.* 1*d.* per lb. Cuprea, 1¾*d.* to 3⅝*d.* Cartagena (20 bales), small soft dusty chips, 2½*d.*

East Indian.—Red chips and shavings, 2⅝*d.* to 3*d.*; good ditto, 3½*d.* to 4¼*d.*; root, 3⅝*d.* to 5⅜*d.*; renewed, 4*d.* to 4½*d.* Crown chips and shavings, 3½*d.* to 5⅝*d.*; good, 7¼*d.* to 8¾*d.*; rich, 10*d.* to 11⅝*d.*; renewed, 2¾*d.* to 5¾*d.*; rich, 11¼*d.*; root, 7⅝*d.* to 8¼*d.* Ledgeriana, natural stem chips, &c., 4⅝*d.* to 6¾*d.*; and root, 8*d.* to 9¾*d.* per lb. Darjeeling, Ledgeriana, stem chips, 8⅜*d.*; broken quill, 10½*d.*; and root, 11*d.* Officinalis, natural stem chips, 6¾*d.*

Ceylon.—Officinalis, chips and shavings, 7*d.* to 7¼*d.*; quill and chips, 5*d.* to 5⅞*d.*; and renewed chips, 4¾*d.* to 5¾*d.* Red natural stem chips, ordinary to good, 3*d.* to 9*d.*; chips and shavings, 3½*d.* to 7*d.*; branch, 2*d.* to 4¼*d.*; root, 3½*d.* to 5*d.*; renewed stem chips and shavings, 3¼*d.* to 7¾*d.* per lb.

The auction to be held at Amsterdam on June 13 will consist of 3,068 packages Ledgeriana, hybriden officinalis, and 90 cases 711 bales Succirubra. The stock in first hands at Amsterdam on May 22 consisted of 2,715 packages Government bark, and 6,443 packages private, including the quantity to be offered in auction. A supplementary catalogue will be published within a couple of days.

Cinnamon.—The usual quarterly sales were held last Monday. About two-thirds of the quantity offered sold, at prices on a par with those obtained three months ago. Fine thin quill brought 1*s.* 3*d.* to 1*s.* 6*d.* per lb.; good thin, 11*d.* to 1*s* 2*d.*; ordinary to good firsts, 10*d.* to 11*d* ; seconds, 9*d.* to 10½*d.*; thirds, 8⅓*d.* to 9½*d* ; and fourths, 8*d.* to 9½*d* per lb.

Ergot.—Quotations both in London and Hamburg have advanced, and both markets are very bare. An offer of 2*s.*, c.i.f., has been refused for Russian, 2*s.* 1*d.* being wanted. In auction two bags of good sound Spanish catalogued for sale had been sold privately.

Gentian is firm, at 17*s.* per cwt., at which figure further business is reported on the spot. A report from Trieste, dated May 15, states that the stock of gentian is nearly exhausted in that district, and quotations have advanced to 17*s.* 6*d.* per cwt., c. and f.

Magnesia.—There is really nothing in the rumour regarding the combination, and the London agents for the Washington Chemical Company, the principal magnesia-manufacturers in this country, inform us that they have not heard anything about such an arrangement and ask us to contradict the statement.

Oil, Cod-liver.—Our Bergen correspondent writes on May 18 that the Finmarken cod-fishery has slightly improved this week, but no alteration has been made in the quotation, which remains firm at 57*s.* per barrel, f.o.b. The exports

from Bergen up to date amount to 4,042½ barrels, against 3,135 barrels at the same time last year.

QUICKSILVER.—Very firm, at 9*l.* 2*s.* 6*d.* per bottle from the importers. The quotation has undergone no change for the past eight months, and it is said that such a circumstance has not been known for thirty years.

QUININE.—The week opened quietly, buyers generally waiting the result of the bark auctions on Tuesday, at which an advance took place in the unit. This led to a good business on that day, August delivery selling at 1*s.* 4¾*d.* to 1*s.* 4⅞*d.*, and October at 1*s.* 5*d.*, but since then the speculative market has been quieter, with sellers at these figures. The agents for the Brunswick factory reports a sale of 20,000 oz to speculators at 1*s.* 5*d.*

The exports of quinine from Java during December, 1900, amounted to 66 cases, of which 58 cases were shipped to Amsterdam, six to New York, and two to the United Kingdom. From January 1 to December 31, the shipments have been :—

	1900	1899	1898
Cases	1,916	754	1,172

SOY.—It is reported that a parcel has been stopped by the Customs as it was found on analysis to contain 40 per cent. of sugar, so that a proportionate duty has to be paid. The quotation has consequently been advanced 3*d.* per gal. In auction 50 packages were withdrawn, owing to want of particulars about this duty.

SPICES.—A fair business has been done during the week without much alteration in prices. Pepper has been steady, but cloves and ginger are slightly easier. At auction on Wednesday Cochin *Ginger* was in larger supply, but there being no demand it was all bought in; washed rough at 38*s.* 6*d.* to 42*s.*, dull small at 37*s.* 6*d.*, and common rough at 33*s.* per cwt. A parcel of heavily-limed Japan, of old import, sold at 32*s.*, ordinary rough being bought in at 34*s.* per cwt. Jamaica only partly sold at about 2*s.* 6*d.* per cwt. decline; common at 40*s.* to 42*s.* 6*d.*, middling at 43*s.* to 47*s.* 6*d.*, and fair to good bold at 51*s.* 6*d.* to 65*s.* per cwt. Zanzibar *Cloves* were bought in at 4¼*d.* per lb. for good fair. For delivery the market declined early in the week, but has since recovered; June-August sold on Wednesday at 4 1/32*d.*, and August-October at 4 1/16*d.* per lb. Fine Natal *Capsicums* sold at 85*s.* per cwt., and East India cherries at 24*s.* 6*d.* *Pimento* firmer; fair sold at 2 5/8*d.*, ordinary at 2 3/16*d.*, and dark dusty at 2½*d.* per lb. *Cassia-lignea* sold "without reserve" at easier rates; good, old import, at 46*s.* 6*d.* and common false packed at 35*s.* to 38*s.* per cwt. *Cinnamon-chips* partly sold at 2¾*d.* per lb. for dull and barky. *Pepper* steady, but quiet; good estate East India sold at 6*d.* to 6¼*d.* per lb. for small heavy, and at 6⅛*d.* to 6⅜*d.* for bold. Tellicherry was bought in at 6¼*d.*, Alleppy at 6⅛*d.*, Trang at 6¾*d.*, and Singapore at 6½*d.* per lb. Singapore white sold at 9⅜*d.* for good fair, and at 1*s.* per lb. for fine bold. Siam was bought in at 9½*d.*, and Penang at 8⅞*d.* per lb.

London Drug-auctions.

MODERATE supplies were brought forward at to-day's auctions of new and second hand goods, and a fair proportion was disposed of. A noticeable feature again was the abundant supplies of Jamaica honey of new crop; but buyers were not eager for it. West Indian tamarinds were also well represented, and met a decline. Rio ipecacuanha was more liberally offered; but the only importer showed no disposition to ease prices, notwithstanding the recent arrival and the parcel now landing. Cartagena was lower. A medium parcel of Curaçao aloes was offered and sold; Cape went off well, but Zanzibars were neglected. Cardamoms were in slow demand, and irregular. Fine Shensi rhubarb was lower. Buchu leaves were full up; and for fine nux vomica higher rates were paid. Large supplies of calumba, of medium and lower grades, passed unnoticed. Balsam Peru was slightly easier. Extreme prices were paid for Alexandrian sennapods. The following table shows the goods offered and sold, the asterisk applying to goods sold privately :—

	Offered	Sold
Albumen	6	0
Aloes—		
Cape	32	32
Curacao (boxes)	129	71
(gourds)	200	200
Socotrine	45	6
Zanzibar	17	0
Ambergris	5	1
Ammoniacum	24	7
Anise	75	0
Anise, star	10	0
Annatto-seed	30	0
Areca-nuts	40	0
Asafetida	124	83
Asphaltum	89	0
Bael-fruit	20	0
Balsam copaiba	32	2
Peru	2	1
Tolu	43	18
Benzoin—		
Palembang	74	43
Siam	15	0
Sumatra	159	24
Bird-lime	20	0
Buchu	18	18
Calumba	443	46
Camphor (Jap) (refined)	133	0
(Jap crude)	53	38*
Canella alba	15	5
Cannabis indica	22	0
Cardamoms	299	97
Cascara sagrada	86	0
Cashew-nuts	32	0
Cassia fistula	46	0
Cassia lignea	52	0
Chamomiles	4	0
Chillies	6	6
Chiretta	23	0
Cinchona	1	0
Civet	11	0
Coca leaves	13	12
Cocculus indicus	97	0
Colocynth	33	0
Croton-seed	30	0
Cuttle-fish bone	48	5
Dandelion	24	0
Divi Divi	14	0
Dragon's-blood	19	0
Elaterium	1	0
Ergot	2	2*
Euphorbium	4	4
Galangal	48	0
Galbanum	10	0
Galls	72	25
Gamboge	10	8
Guaiacum	4	4
Gum acacia	97	24
Senegal	1	1
thus	10	0
Honey (Australian)	30	0
Cuban	5	5
Hayti	6	0
Jamaica	568	264
Insect-powder	8	0
Ipecacuanha—		
(Cartagena)	49	22
(Rio)	52	16
Jalap	53	3
Kamala	6	0
Kino	17	0
Kola	45	0
Lemon-juice	15	0
Lime-juice	31	0
Liquorice powder	10	0
root	165	3
Matico	19	0
Menthol	2	2
Musk	1	0
Musk-seed	1	1
Myrrh	41	0
Nux vomica	107	0
Oil—		
bay	2	2
cajaput	41	0
camphor	200	100
cod-liver (Jap.)	142	0
eucalyptus	40	0
lemon-grass	25	0
lime	13	4
orange	2	0
peppermint	10	0
rose (E.I.)	2	0
sassafras	2	0
wintergreen	2	0
wood	62	0
Olibanum	23	0
Orange peel	83	0
Orris	30	0
Pareira brava	26	0
Patchouli-leaves	22	0
Rhatany	15	0
Rhubarb	115	14
Safflower-seeds	2	0
Sarsaparilla	59	10
Scammonium	3	0
Scammony-root	14	14*
Senna, Alexandrian	80	12
Mecca	40	0
Tinnevelly	152	102
Senega	2	0
Snake-root	6	0
Soy	50	0
Squills	40	0
Sticklac	54	0
Storax	5	0
Strophanthus	5	0
Tamarinds (W.I.)	458	280
(E.I.)	20	0
Taraxacum	16	0
Tonka-beans	9	0
Tragacanth	18	2
Turmeric	599	99
Vanilla	1	0
Vermilion	8	0
Wax (bees')—		
Cuban	8	0
East Indian	60	0
Italian	10	0
Jamaica	25	17
Madagascar	424	131
Morocco	33	0
Spanish	48	0
Zanzibar	15	6
Wax, Carnauba	15	0
Hayti	8	0
Japan	50	0

ALOES.—In fair demand. Of Curaçao 129 boxes offered of which 71 boxes sold at 23*s.* for good brown liver, 18*s.* for fair ditto, and 16*s.* to 17*s.* 6*d.* for fair blackish; 200 gourds also sold at 22*s.* per cwt., without reserve, for a parcel of old import, but containing fair black quality. Thirty-two cases of Cape also sold, 24*s.* to 26*s.* 6*d.* being paid for fair to good seconds, 23*s.* to 23*s.* 6*d.* for ordinary ditto, slightly drossy, and 20*s.* 6*d.* to 21*s.* 6*d.* for very drossy. A few kegs of Socotrine sold at 72*s.* 6*d.* for softish, but for Zanzibar in skins there was no demand. The s.s. *Kinfauns Castle* has arrived from Mossel Bay with 111 cases of Cape.

AMMONIACUM.—Dark seedy block and siftings sold without reserve at 6*s.* 6*d.*, if pay charges.

ASAFETIDA.—Fine, of which only 1 case offered, was 20*s.* per cwt. lower. Good greyish broken and nice pinky block (1 case) sold at 6*l.*; good almondy loose block, slightly brownish, 5*l.* to 5*l.* 5*s.*; pinky sandy block, 85*s.* to 87*s.* 6*d.*; ditto, more mixed, 75*s.* to 80*s.*; heavy sandy and almondy block, partly loose and a little foul with matting, 77*s.* 6*d.*; dark greyish block, with some good gum, 65*s.*; and ordinary grey block, loose, 55*s.* per cwt.

BALSAM COPAIBA.—Two tins of cloudy balsam from Bahia sold at 1*s.* 8*d.* per lb. subject.

BALSAM PERU.—A direct arrival of 2 cases from Panama sold at 6*s.* per lb. for fair thickish. Privately, a slack market is reported.

BALSAM TOLU.—Unchanged. Sixteen large tins of good fair balsam, part softish, sold readily at 1*s.* 1*d.* to 1*s* 2*d* per lb., and slightly drossy 1*s.*, all subject to owner's approval.

BENZOIN.—Quiet at unchanged rates. Eight cases of small and medium Siam loose almonds were held for 15*l.* 10*s.*, at which figure the broker intimated he was selling privately Eight cases of Sumatra seconds sold at 6*l.* 15*s.* for fair, and 6*l.* 5*s.* for ordinary ditto. A few cases good seconds well almonded sold at 8*l.* to 8*l.* 5*s.* per cwt. 43 cases of ordinary very false packed Palembang sold "without reserve" at 35*s.* per cwt., and 23 cases of ordinary to low were taken out without mention of price.

The exports from Singapore from January 1 to April 15 were as follows:—Great Britain, 500 piculs; Continent, 801 piculs; and U.S.A., 59 piculs.

BUCHU sold well at full up to firmer rates, 1*s.* 1*d.* to 1*s.* 2*d* per lb., subject to owners' approval, being paid for good green round leaf, 6½*d.* to 9*d.* for yellowish, and 2*s.* 1*d.* for long.

CALUMBA.—In excessive supply and neglected. Ordinary dull and lean sorts, sea-damaged, sold at 10*s.* per cwt.; and bold clean stemmy at 10*s.* 6*d.*

CANELLA ALBA partly sold at 50*s.* per cwt. for small broken quill.

CARDAMOMS.—In slow demand, at about steady rates. Ceylon-Mysore, medium to bold but dullish, 3*s.* 4*d.*; good medium pale, 2*s.* 6*d.* to 3*s.*; medium pale long, 2*s.* 2*d.* to 2*s.* 4*d.*; small pale, 1*s.* 9*d.* to 1*s.* 10*d.*; medium split, 1*s.* 6*d.*; small to medium dullish, 1*s.* 4*d.* to 1*s.* 7*d.*; brown and split, 1*s.* 5*d.*; seed, 2*s.* to 2*s.* 2*d.*; Ceylon-Malabar, fair brown, 1*s.* 10*d.* per lb.

CHILLIES.—A parcel of good bright red Japanese, but sea damaged, sold at 43*s.* 6*d.* per cwt.

COCA-LEAVES.—Ceylon, the only description offered, sold at lower rates, 7½*d.* to 8*d.* per lb., subject, being paid for fair.

EUPHORBIUM.—Four serons sold at 18*s.* per cwt., subject.

GAMBOGE.—Eight cases offered and sold without reserve, at 8*l.* 5*s.* to 8*l.* 10*s.* per cwt. for very much broken Siam pipe of fairly good fracture. For 2 cases of unsorted blocky Pile I. pipe 9*l.* 7*s.* 6*d* was refused. From January 1 to April 15 the exports from Singapore to Great Britain amounted to 13 piculs.

GUAIACUM.—Four cases were put up "without reserve," and sold at 1*s.* to 1*s.* 0¾*d.* for fair glassy block, and 10¾*d.* per lb. for drossy.

HONEY.—Jamaica was again in abundant supply, but the demand was slow, and easier prices were accepted. Pale amber syrupy in tins brought 23*s.* 6*d.* to 24*s.* per cwt; good pale amber to dark liquid in casks and cases, 21*s.* 6*d* to 23*s.*, down to 18*s.* for very dark; mixed set white, 22*s.* to 23*s.* 6*d.*, and half set white in barrels, 20*s.* 6*d.*; brown set, 21*s.* to 21*s.* 6*d.*; Cuban, dark liquid in tierces, 18*s.* 6*d.* per cwt.

IPECACUANHA.—A larger proportion of sea-damaged Rio than usual being offered no serious attempt was made to sell sound root, which was well held at from 12*s.* 2*d.* to 12*s.* 5*d.* per lb. The sea-damaged all sold at somewhat irregular prices, one bale selling cheaply at 10*s.*, while up to 12*s.* 4*d.* was paid for only slightly damaged. A parcel of 22 bags and barrels Cartagena sold readily at from 6*s.* to 6*s.* 1*d.* per lb., the bulk at the inside figure. These prices mark a decline of 4*d.* to 6*d.* on the rates paid privately. Several other small parcels were held for higher rates. The s.s. *Nile* has arrived with 70 bales of Brazilian root from Monte Video.

JALAP.—The s.s. *Jamaica*, from Vera Cruz, has arrived in Liverpool with 28 sacks. In auction 3 bales of Vera Cruz, of fair quality, sold without reserve at 6½*d.* per lb.

MENTHOL.—Two cases of Kobayashi crystals sold at 11*s.* 6*d.* per lb. "without reserve."

MUSK.—A caddy of old-fashioned Tonquin pod, fair flavour and dry, was bought in at 30*s.* per oz. Privately a small business is reported, 70*s.* per oz. having been paid for Pile I. thin blue skin.

MUSK-SEED.—A cask sold with good competition at 11¼*d.* per lb. "without reserve" for old East Indian of weak flavour.

NUX VOMICA.—Fine bold seed from Bombay realised 10*s.* 6*d.* per cwt., and for dull earthy Madras 6*s.* 6*d.* was wanted. Good sea-damages sold at 6*s.* 6*d.*, sweepings at 2*s.* 6*d.*, and pickings at 5*s.* per cwt., subject. Another lot of 21 bags in another catalogue realised 4*s.* 3*d.*

OIL, BAY.—Two tins direct from Montserrat sold at 5*s.* 6*d.* per lb.

OIL, CAMPHOR.—One hundred cases of white sold without reserve at 21*s.* to 23*s.* per cwt.

OIL, LIME.—A case of West Indian hand-pressed sold at 5*s.* 3*d.* per lb., and for a few cases of the distilled oil 1*s.* 9*d.* was paid.

OIL, PEPPERMINT.—American HGH is quoted 6*s.* 4½*d.* to 6*s.* 5*d.* per lb., spot, according to holder.

ORRIS.—Quiet. Ten bags of picked Florentine were held for 35*s.* per cwt.

RHUBARB.—The business transacted publicly was confined to parcels without reserve, and comprised the following:—Four cases of Shensi, at 2*s.* 4*d.* for fine bold round, fair to good orange coat, with three-quarters pinky and one-quarter grey fracture; and a case of good round Shensi pickings at 9*d.* per lb. Nine cases of odds and ends sold "without reserve" as follows:—Canton, medium flat, with grey fracture, 8*d.* to 8½*d.*; high-dried, small, even pinky fracture, 8*d.*; good Shensi round pickings, 10½*d.*; low rough round and flat ditto, 4½*d.* to 5*d.*

SARSAPARILLA.—No grey Jamaica was shown to-day. Of 13 bales Lima-Jamaica offered, 2 sold at 1*s.* 2*d.* per lb. for sound, and of 7 bales common Guayaquil 3 had been sold privately; 10*d.* was wanted for the remainder. Native Jamaica, red sea-damaged, sold at 8*d.*, and common grey at 6*l.* A few bales were held for high prices.

SENNA.—The bulk of Tinnevelly leaf offered was of the ordinary small and brownish description, which sold at from ¾*d.* to 1¾*d.* per lb. Tinnevelly pods, 4½*d.* to 5*d* per lb. A new arrival of 12 cases Alexandrian offered and sold at 6¼*d.* for fair whole green leaf, 4½*d.* for half-leaf, 3*d.* for good siftings, and 1*s.* 3*d.* to 1*s.* 4*d.* per lb. for good pale pods.

TAMARINDS.—For several parcels of new-crop Antigua 9*s.* 6*d* to 10*s.* was paid, and 8*s.* 6*d.* for Montserrat.

TONKA-BEANS.—Four casks of good frosted Angostura beans were held for 3*s.* per lb., and for 2 casks of fair Surinam 2*s.* 3*d.* was wanted.

TURMERIC.—With the exception of a sale of 99 bags of fair Bombay finger at 27*s.* 6*d.* per cwt., the excessive supply offered was bought in.

WAX, BEES'.—Jamaica was about 5*s* cheaper, fair to good yellow and brown selling at 8*l* 2*s.* 6*d* to 8*l.* 10*s.* and dark at 8*l.* Zanzibar was represented by 15 packages, of which six sold at from 6*l.* 15*s.* to 7*l.* per cwt. for mixed colours. Madagascar was in large supply, and part sold at 6*l.* 17*s.* 6*d.* to 7*l.* for sound, and at from 6*l.* to 6*l.* 10*s.* for wormy ditto. Neither East Indian nor Morocco wax was sold.

Coming Event.

Wednesday, May 29.

Public and Poor-law Dispensers' Association, St. Bride's Institute, Ludgate Circus, E.C., at 8 P.M.. Mr. C. Spencer on "The Relations between the Prescriber and the Dispenser."

"THE DANGER OF TABLOIDS" is the title of a rather hysterical article in the *Evening News*. Following up Sir J. C. Browne's pharmaceutical dinner speech the *Evening News* interviewed "an eminent medical authority," who told the interviewer how "society ladies sap their energies with deadly drugs in tabloid form, and in favour of the tabloid said that in its manufacture the human elemont of inaccuracy—always present to a greater or less degree even in the best dispensing—is absolutely avoided. The great German and English factories turn out thousands upon thousands of tabloids with absolute scientific accuracy, so that a medical man to-day knows that the exact effect he desires will result from their use."